

A HOME DEFENSE BEAST: THE COLT M4

MSR

MODERN SPORTING RIFLES

TOP **5** MSR'S

**HUNTER'S
CHOICE**
SMITH &
WESSON
M&P 10

**BETTER
ACCURACY NOW**
THE **6mm BR Norma**



SHOOT 
LIKE A PRO
OLYMPIANS
REVEAL
THEIR
SECRETS



**TACTICAL NIGHT
VISION'S GEN 3**
QUALITY, PRICEY:
WORTH IT?

CMMG'S MK. 3 

BATTLE RIFLE

FROM THE EDITORS OF WORLD OF FIREPOWER
MODERN SPORTING RIFLES • WINTER 2014
U.S. \$8.99 • DISPLAY UNTIL: 1/20/15



Engaged Media By Beckett

**TIGHT GROUPS
AT 100 YARDS**
**BERETTA
ARX 100**

**PROLONG
THE LIFE OF
YOUR AR**
3 EASY STEPS



BEST CHOICES
**FOR TACTICAL
LIGHTS, SLINGS
& SCOPES**

VERSATILITY IS ITS MIDDLE NAME.



Whether you're whitetail deer hunting in Maine or long distance shooting at the range, the LE901®-16S .308 Winchester (7.62 x 51 NATO) has the versatility you need. The revolutionary lower receiver and bolt carrier design enables the upper receiver group to be easily swapped out to any Colt MiSpec 5.56 x 45 NATO (.223 Remington) upper receiver with the included conversion kit – without tools, in under a minute. Operating controls are ambidextrous, providing flexibility and ease of use. When on the hunt for a versatile and reliable rifle, demand quality; demand Colt.



COLT.COM

800.962.COLT

 FACEBOOK.COM/COLTFIREARMS

 @COLTFIREARMS



YOUR MISSION. OUR COMMITMENT.



EDITORIAL

Editorial Director: Erin Masercola
Editor-in-Chief: Stan Skinner
Editor: Doug Jeffrey
Managing Editor: Devlin Smith
Outdoor Intern: Dan Lewis Fawcett
Senior Creative Director: Eric Knagg
Art Director: Tracy Powell

CONTRIBUTORS

Ryan Lee Price, Bob Campbell, Abe Elias, Richard Crays, Jason Davis, Terrill Hoffman, Chuck Taylor, Eva Subido, KM Lee, Bill Ball, Karen Skelly, Robert Diamond, Tom Kirby

ADVERTISING

Gabe Frimmel - Ad Sales Director
(714) 200-1930 - GFrimmel@Beckett.com
Casey Clifford - Senior Account Executive
(714) 312-6275
Mark Pack - Senior Account Executive
(714) 200-1939
Gennifer Merriday - Ad Traffic Coordinator

DIRECT MARKETING GROUP

John Bartulin (866) 866-5146 ext. 2746
Paul Caca (866) 866-5146 ext. 4961
Ryan Lauro (866) 866-5146 ext. 2756

OPERATIONS

Gus Alonzo: Newsstand Sales Manager
Celia Merriday: Newsstand Analyst
Mohit Patel: Newsstand and Production Analyst
John Cabral: Creative Graphic Designer

EDITORIAL, PRODUCTION & SALES OFFICE

22840 Savi Ranch Parkway, #200
Yorba Linda, CA 92887

Ph: (800) 332-3330

Fax: (800) 249-7761

www.facebook.com/worldoffirepower

www.facebook.com/eembybeckett

Modern Sporting Rifles © 2014 by Engaged Media, Inc. All rights reserved. Reproduction of any material from this issue in whole or in part is strictly prohibited.

CUSTOMER SERVICE

ENGAGED MEDIA, INC.
4635 Mc Ewen Road, Dallas, TX 75244

SINGLE COPY SALES

(800) 764-6278
(239) 653-0225 Foreign Inquiries
subscriptions@beckett.com
customerservice@beckett.com

BACK ISSUES

www.engagedmediamags.com

BOOKS, MERCHANDISE, REPRINTS

(239) 280-2380

DEALER SALES

(239) 280-2380

NEW PRODUCTS OR TO CONTRIBUTE

A STORY OR PHOTO
djeffrey@beckett.com

**ENGAGED MEDIA BY BECKETT**

Nick Singh: Executive Director
Vikas Malhotra: Vice President
Erin Masercola: Group Editorial Director

This magazine is purchased by the buyer with the understanding that information presented is from various sources from which there can be no warranty or responsibility by Engaged Media, Inc. as to the legality, completeness or technical accuracy.

CONTENTS

MSR

FEATURES

10 FOIL THE FAILURES

If you dig optimal firearm performance, you need this step-by-step guide to caring and cleaning your AR. *By Ryan Lee Price*

12 HAVE GUN, WILL TRAVEL

We've set the record straight on how to travel with firearms safely and legally in the United States. *By Ryan Lee Price*

22 MVP'S OF MSR'S

They are the best of the best. The elite. They are the top five modern sporting rifles. *By Abe Elias*

32 TAILORED TO YOUR DESIRES

We got your road map to assembling a lower receiver right here. *By Stan Skinner*

36 HOME DEFENDER

If you want an AR that will be a defensive beast, look very closely at this Colt. *By Terrill Hoffman*

44 REFINED 10

Let's play word association. We say CMMG's Mk3, and we say quality and power. *By Terrill Hoffman*

52 HEART OF WILDERNESS COUNTRY

If you're a hunter, pass pages 1-51 and go right to this page.



14 TWIN GUNNERS

Between them, you practically need a calculator to add up how many championships they have in biathlon. Now, the Barnes sisters have taken their talents to 3-Gun. *By Doug Jeffrey*

54 GOT GAME?

If you want fast, accuracy and dependability in your hunting rifle, you need the AR-15. *By Chuck Taylor*

60 OUTGUN THEM

The 6mm BR creates accuracy, safety and reliability in your AR-15. *By Bill Ball*



78 3 GUN NATION

If you're competitive, you want to know how your shooting skills compare to others and 3-Gun competition is the method to find out. *By Eva Subido*

PRODUCT GUIDES 40 TACTICAL LIGHTS / 92 SCOPES / 114 SLINGS **COLUMNS** 6 FROM THE EDITOR / 8 FIRST SHOTS

67 40,000 ROUNDS

If shooting more often is on your wish list, you need to be reloading. Here's how you do it.

By Robert Diamond

70 MADE IN AMERICA

We field-tested the PTR-91 and we got the full story. *By KM Lee*

76 ADRENALINE RUSH

It's challenging, intense and action-packed. Enter the world of 3-Gun competition.

86 SUITABLE FOR MANY CHORES

If you're looking to bolster your home defense with an MSR, the Beretta ARX 100 should be high on your list.

By Bob Campbell

104 HUNTER'S CHOICE

Let's cut to the chase. We field-tested the Smith & Wesson M&P 10 and this AR-10 gets the job done.

By Stan Skinner

110 OL' RELIABLE

The MSR fills several functions and home "D" is one of those roles.

By Richard Crays

118 MA DEUCE

If you're looking for fire-power, look no further than the 50 cal.

By Stan Skinner

122 TAX DOLLARS AT WORK

While we sit behind our desks typing away, "T" wandered into the night to check out the latest night vision gear from TNVC.

By Terrill Hoffman

130 UNTIL NEXT TIME ...

COVER 1: BARNES TWINS, PHOTO BY KAREN SKELLY

COVER 2: CMMG'S MK. 3, PHOTO BY TERRILL HOFFMAN

WHAT IS A MODERN SPORTING RIFLE?

BY STAN SKINNER



↑ Stan Skinner, captured in one of his favorite places, says all gun enthusiasts are brothers and sisters, regardless of what they shoot.

What is a “modern sporting rifle?” For that matter, what is a sporting rifle, modern or not?

All I can offer on the subject is based on my personal experience because I am a gun nut.

I have been a gun nut at least since I was in kindergarten. No, I did not shoot my first gun at the age of

five. I had never even seen a real one in the flesh or, more correctly, in the wood and steel.

The local television station had a program with a segment in which the host interviewed small children, a condition I qualified for at the time. The host, whose name was Danny Williams, asked me what I wanted to

be when I grew up.

“A soldier,” I said.

“Why?”

“So I can shoot guns.”

BALLISTICS BY 12

I won’t bore you with the details of how my interest grew and flourished, except to say that by the time I was 12, I could recite the ballistics of the .300 Weatherby Magnum out to 300 yards. Yes, Roy Weatherby and the men who hunted with his guns were godlike figures to me.

The first real honest-to-God centerfire rifle I ever owned was a Model 94 Swedish Mauser chambered for 6.5x55mm Mauser. That rifle escaped my grasp somewhere in later years and I dearly wish I could have it back, or one just like it. Unfortunately, a Model 94 Mauser rarely appears at

gun shows, and when they do, the price threatens to bring tears to my eyes.

I paid \$29.95 plus tax for mine at Monkey Ward. Those were the days.

For me, almost any rifle is a sporting rifle. Therefore, a modern sporting rifle is almost any rifle of recent design that a civilian can own. Is it an AR-15? Uh-huh. How about a Blaser 95? Yep. Maybe a Kel-Tec Sub2000? You betcha.

The AR-15 is what most people think of as a modern sporting rifle, so you’ll see a lot of it in *Modern Sporting Rifle* magazine. In addition, you’ll see the .50 BMG ArmaLite, the Beretta M2 shotgun. (OK, I know that’s not a rifle, so sue me).

The point is, this is a magazine for gun nuts. If you are interested in home defense, you’ll find it here. If you are a 3-Gun or bull’s-eye competitor, this is a good place to read about it. Maybe, you just want to plink. Go for it!

All gun nuts are brothers and sisters at heart, and we at *Modern Sporting Rifle* celebrate that fact. **MSR**

ANY MISSION. ANY DAY.



ORIGINAL
S.W.A.T.

Whether you serve your country or community, Original Footwear stands behind every boot we make. Our unwavering objective is to design, develop, produce, and deliver the most reliable military and law enforcement footwear available.

ALTAMA®

Battle-ready since 1969.

FIRST SHOTS

RAISE YOUR GAME

GEAR TO
TAKE YOUR
SKILLS TO
THE NEXT
LEVEL



MSR



MSRP: \$34.95

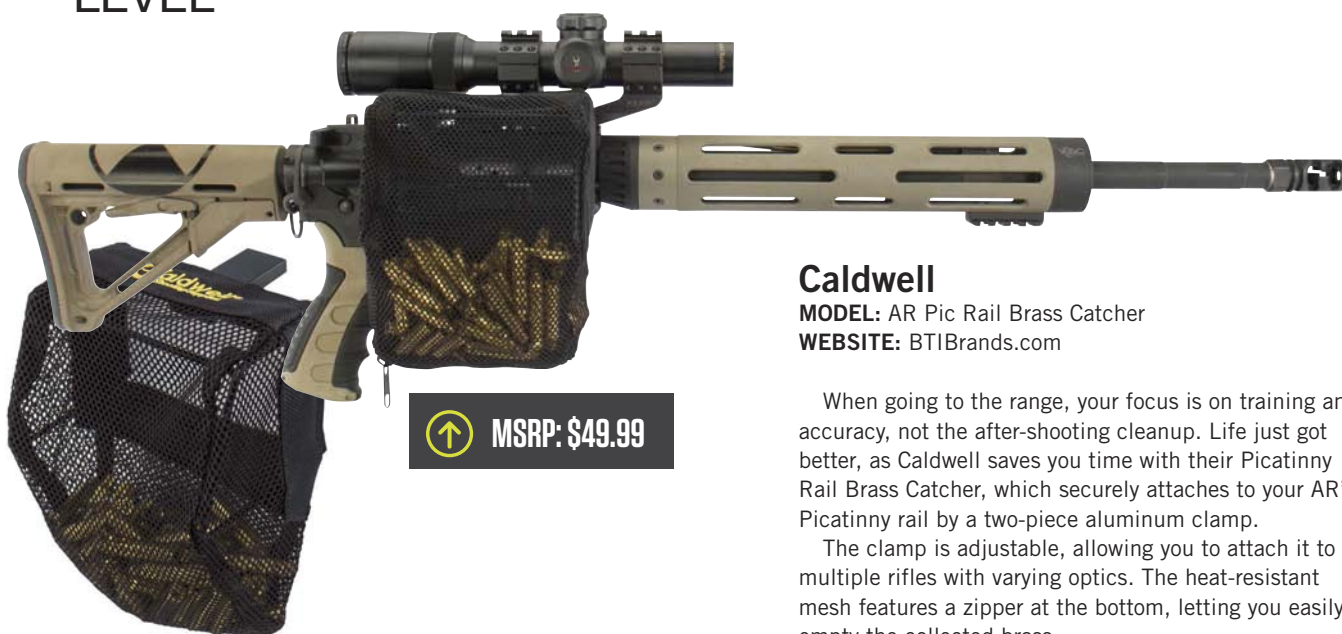
Mechanix

MODEL: MultiCam M-Pact

WEBSITE: Mechanix.com

When handling your gun, you'll want a firm, no-slip grip, but you'll also want to be comfortable in the gloves you're wearing. The MultiCam M-Pact gloves give you the best of both worlds.

Designed for the U.S. Army, the gloves feature a knuckle guard and padded palm to absorb impact. The impact guard frees your index finger, allowing for smooth trigger guard entry and mobility. Its camouflage appearance makes it perfect for any light condition and environment, and the inner rubberized grips also allow you to keep a firm grasp on the firearm. The form-fitting TrekDry helps keep your hands cool, too



MSRP: \$49.99

Caldwell

MODEL: AR Pic Rail Brass Catcher

WEBSITE: BTIBrands.com

When going to the range, your focus is on training and accuracy, not the after-shooting cleanup. Life just got better, as Caldwell saves you time with their Picatinny Rail Brass Catcher, which securely attaches to your AR's Picatinny rail by a two-piece aluminum clamp.

The clamp is adjustable, allowing you to attach it to multiple rifles with varying optics. The heat-resistant mesh features a zipper at the bottom, letting you easily empty the collected brass.



MSRP: \$499

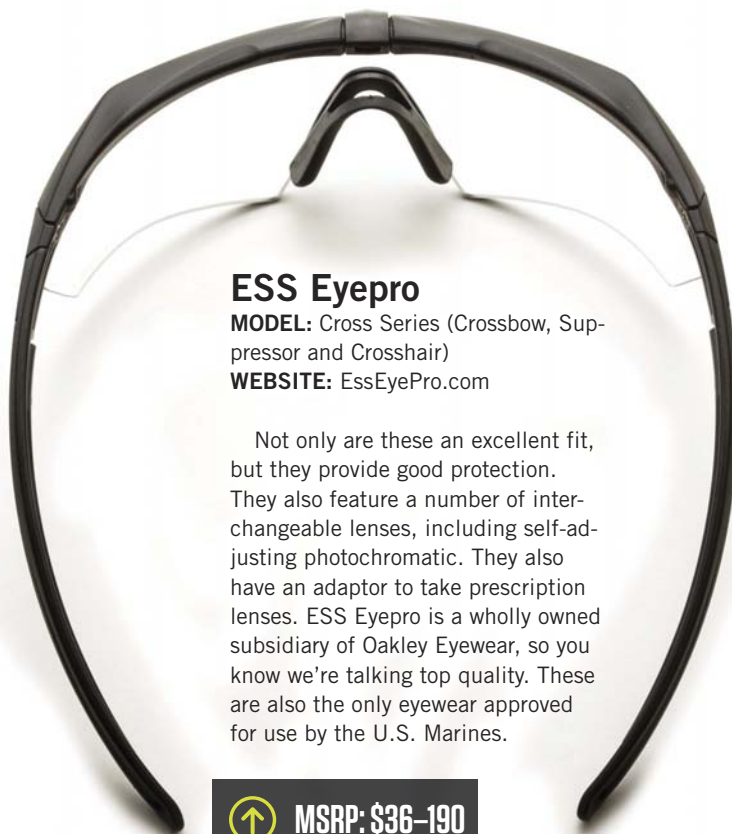


Affliction

PRODUCT: Gents Chronograph Steel Watch

WEBSITE: AfflictionClothing.com

Whether you're shooting, swimming or dashing to a cab in the rain, you need a watch that can face the elements. Your choice should be the stylish, sleek and stainless steel Affliction Waterproof Chronograph Watch. It is anything but typical.



ESS Eyepro

MODEL: Cross Series (Crossbow, Suppressor and Crosshair)

WEBSITE: EssEyePro.com

Not only are these an excellent fit, but they provide good protection. They also feature a number of interchangeable lenses, including self-adjusting photochromatic. They also have an adaptor to take prescription lenses. ESS Eyepro is a wholly owned subsidiary of Oakley Eyewear, so you know we're talking top quality. These are also the only eyewear approved for use by the U.S. Marines.



MSRP: \$36-190



MSRP: \$292

Barska

MODEL: 2000 Lumen FLX Flashlight

WEBSITE: Barska.com

Barska recently introduced this newly designed 2,000-lumen tactical LED flashlight.

Not only does the FLX feature high-power LED technology, but the solid yet lightweight aluminum light is shockproof and utilizes advanced constant current technology. This provides you with a stable output of continuous light, prevent dimming of light as the batteries lose power.

It has five operation modes, including SOS. **MSR**



MSRP: \$484.38

MGM Targets

MODEL: IPSC Hostage Target

WEBSITE: MGMTTargets.com

If you're looking to spend more time training and less time re-setting targets, take a close look at this. It is designed to expose as much or as little of the terrorist as you want, which can bump the degree of difficulty way up. The round can be positioned all the way to either side or at any point in between. When the round is hit, it bounces back to the position you set.



HOW-TO

MSR

FOIL THE FAILURES



STEP-BY-STEP GUIDE FOR THE CARE AND CLEANING OF A COLT AR-15

STORY AND PHOTOS BY RYAN LEE PRICE



It is important to properly care for and clean the AR-15 to prevent fouling, misfires and failure while promoting a long life.



LEFT: Always use a quality bore cleaner and a fine brush that is smaller in diameter than the barrel and always clean from breech to muzzle to push out unwanted debris toward the direction of fire. **RIGHT:** The exterior of the AR can get just as dirty as the interior, so a solvent-soaked cloth should be used to wipe down the entire rifle.

As with any gun, proper maintenance is necessary to keep it in perfect working order and at the ready when needed. The AR-15 is no different.

In the following story, you'll get the complete rundown on how to care and clean your AR.

1 SAFETY FIRST

The first step is always the most important.

Clear the gun of any ammunition by removing the magazine and inspecting the chamber while the bolt carrier assembly is held back to make sure it is empty.

To properly clean the AR, strip it down to its major groups—the upper, lower and bolt carrier components. Remove the bolt, the buffer tube and spring.

Your owner's manual is a great guide for fieldstripping the weapon.

2 CLEANING

Next, use a cloth to wipe off all the excess carbon deposits on each of the major pieces. Do this before using any cleaning products.

Use a paintbrush and dust off the exterior parts, paying close attention to the small nooks. With a small bowl of gun solvent, soak the small parts and break down any excess buildup. Use a Q-tip dipped in solvent to reach inside the gas key on the bolt carrier.

The buffer spring and tube can be wiped down with a rag and set aside, but if you need to use solvent, use it sparingly.

Turn your attention to the barrel. Take a solvent-dipped small brush (smaller than the diameter of the orifice), attach it to a T-handle and run it down the bore. Always clean from the breech to the muzzle to push out any debris.

Next, do the same thing but with a slotted tip and a clean patch. Repeat until the patches come out clean.

After the smaller bolt parts have had some time soaking in the solvent, use a wire brush to clean off any remaining deposits. Make sure to completely wipe down all these pieces with a rag. Dry the chamber, receiver and flash compensator.

3 LUBRICATION

Apply a small amount of lubricating oil to the engagement surfaces of the hammer and trigger. Place a small drop on each side of the hammer/trigger pin and safety. Apply a generous coating of lubricating oil to the bolt and its smaller parts, and to the outer surfaces of the bolt carrier (like the bolt cam pin).

You can also put a drop or two inside the carrier key and

add a light coat to the charging handle. If there are any pieces particularly shiny from friction, this is where you need to add a drop of oil.

Wipe down the charging handle, adding a couple drops of oil, and place the charging handle into the upper receiver. Make sure to align the grooves of the charging handle with the upper receiver. Rack the charging handle all the way back and then all the way forward to evenly disperse the lubrication.

Wipe down the exterior of the rifle to clean it of any excess oil. If you plan to store the weapon for any amount of time, apply a thin coat of lubricating oil on the bore, chamber and bolt face. If not, make sure these pieces are clean and that no oil has inadvertently leaked into the chamber. **MSR**

THE AUTHOR: Ryan Lee Price is the editor of *American Survival Guide*.

HOW-TO

MSR

HAVE GUN, WILL TRAVEL



HOW TO TRAVEL WITH FIREARMS SAFELY
AND LEGALLY IN AMERICA

STORY AND PHOTOS BY RYAN LEE PRICE



WITH THE INCONSISTENT GUN REGULATIONS IN DIFFERING PARTS OF AMERICA, IT MIGHT BE A LITTLE OVERWHELMING HOW TO PROCEED WITHOUT ENDING UP IN JAIL OR HAVING YOUR GUNS CONFISCATED ...

If you are involved in the shooting sports, or if you're going to, say, join your father-in-law for some bonding time on the range or out in the field during deer season, you're probably going to have to travel with your rifle.

With the inconsistent gun regulations in differing parts of the United States, it might be a little overwhelming how to proceed without ending up in jail or having your guns confiscated because of unfamiliar laws in unfamiliar places.

I'll set the record straight and inform you how to get it done.

ON THE GROUND

There is no one law that protects a traveling gun owner anywhere in the United States. To further complicate matters, many states and cities have their own sets of laws governing the transportation of firearms within their jurisdiction.

As a citizen of the United States, you will be expected to know the law if you plan to travel through those cities and states. However, the Firearms Owner's Protection

Act (FOPA) of 1986 was enacted just for this purpose — to protect those who transport guns for lawful purposes from local laws that would otherwise prohibit a person from doing so in that area.

A person is allowed to transport a firearm from one lawful place of ownership to another. For example, if you are legally allowed to own a gun in Montana, you can transport it to Vermont, as long as you are legally allowed to own a gun in Vermont, despite the fact that you'll be going through Detroit, where you are not legally allowed to own a gun.

Of course, you must always follow the laws regarding transporting guns in a vehicle. They must be unloaded, in a locked compartment or out of sight in a locked case in the trunk, and stowed separately from the ammunition.

Also, it is a good idea to have copies of any applicable licenses and/or permits, and it wouldn't hurt to have a copy of the various laws as they pertain to the jurisdictions you will be traveling through.

IN THE AIR

The Transportation Safety Administration has set up a series of specific requirements regarding the transportation of firearms via commercial airliners. Unloaded and hard-cased firearms must be checked either as luggage themselves or within checked luggage.

No part of a firearm may be carried on the plane, including ammunition. The checked firearms must be declared either in writing or orally when the luggage is checked (the method will vary depending on the carrier). The hard case must be locked, and only you are allowed to keep the key or combination.

It goes without saying that all checked baggage would be inspected, so pay attention to the airport pages and announcements for your name, as further inspection might be necessary and the TSA agents will need to contact you.

Not all airports comply with the federal laws. Authorities at JFK, La Guardia and Newark have recently enforced state firearms laws and have cited travelers passing through those areas, regard-

less of their compliance with the FOPA.

If you are passing through New York or New Jersey, you may wish to ship your rifle instead. California, Hawaii, Washington, D.C. and Massachusetts also have specific and inflexible requirements regarding the importation or transportation of firearms to and within those states. It is best to educate yourself before taking the journey.

STAY ON TOP OF REGULATIONS

Firearm laws on the federal and state level change frequently, so stay on top of regulations. The TSA's website (TSA.gov) is one resource, as is the website for U.S. Immigration and Customs Enforcement website (ICE.gov).

Only by educating yourself about the most current laws and/or consulting an attorney can you be assured of your legal rights when you transport firearms. **MSR**

THE AUTHOR: Ryan Lee Price is the editor of *American Survival Guide* magazine.

SKILL IMPROVEMENT

MSR





TWIN GUNNERS



AFTER DOMINATING OLYMPIC BIATHLON, TWINS LANNY & TRACY BARNES ARE NOW LOCKED ON 3-GUN

BY DOUG JEFFREY

The numbers read like Clayton Kershaw's dominant pitching statistics.

Both Lanny and Tracy Barnes competed in biathlon for 15 years. Lanny competed in three Olympics, has nine World Championships and eight national and six North American titles. If that's not enough to make your head spin, she was also a bronze and silver medalist in the World Junior Championships.

Tracy appeared in two Olympics. She has five World Championships, 10 National and eight North American titles, and she was a silver medalist in the World Junior Championships. She was also given the United Nations UNESCO Fair Play Award for giving her spot on the 2014 Olympic team to Lanny.

Now their sights are solidly set on 3-Gun, as they began competing in May.

In the following story, the twin gunners reveal their training secrets and explain how they plan to become top guns in their latest endeavor.

Like Kershaw, expect consistency and greatness.

Competitors beware.

1 MENTAL PREP FOR COMPETITION

3-Gun is a lot more relaxed and less stressful than biathlon, but mental preparation is just as important. We do a lot of visualization of the stages that we will be doing that day and also listen to music to help us focus. Visualization is one of the most important mental preparations one can do.

FAST FACTS

WEB

TwinBiathletes.com

RESIDENCE

Durango, Colorado

AGE

Lanny is five minutes older than Tracy.

MARRIED

Tracy has been married to Durango Nordic race team coach Gary Colliander for six years.

WEDDING

Lanny recently got married.

PHOTOGRAPHER: KAREN SKELLY

Twins Tracy (right) and Lanny Barnes are medalists in Olympic biathlon, and are now taking their talents to 3-Gun.



The twins say the most challenging aspect of 3-Gun is that the stages are constantly changing and you never shoot from the same position.

PHOTOGRAPHER: KAREN SKELLY





Between them, the pair competed in five Olympics.



2 CROSS TRAINING

A lot of the physical training we do is similar to the training we did for biathlon, but we have incorporated more sprints into our routine. In biathlon, we'd go a minimum of 2 miles before we'd fire our first shot; 3-Gun is a lot less physical, but endurance also can play a big factor.

We do endurance training as well as strength training to prepare our muscles and body for anything we might encounter in a stage. We believe our good physical fitness will really help us in 3-Gun because it will create lower heart rates and quicker recovery times.

3 GUN TRAINING

A lot of our training is focused on increasing speed and transitioning. We com-

bined both speed and accuracy in biathlon, but that was always from either the prone or standing position and not on the move, so incorporating more speed and movement is key to our transition into 3-Gun.

Getting more confident with the pistol and shotgun are top priorities in our training. We have been fortunate enough to get Fiocchi Ammunition for training and competitions so we have been able to keep up with the amount of training we feel is necessary to reach the level we are working toward in 3-Gun.



PHOTOS COURTESY OF LANNY BARNES



PHOTOGRAPHER: KAREN SKELLY

4 TIPS FOR NEWCOMERS

When beginning 3-Gun, you should walk the stages as much as possible prior to a match. Familiarize yourself with the stage, each target order and the way you want to run through the stage. Just because someone else runs it differently doesn't mean that you have to do it the exact same way. Another way and strategy might not necessarily be the best for you. You have to play to your



COURTESY OF LANNY BARNES



To improve, the Barnes twins say they push each other every day.

strengths and that might mean taking another route or target order than someone else.

Never go to war with a target. That was one of the biggest mistakes we made when we started 3-Gun. If you are having problems with knocking down a target, either move on and come back or take the penalty and move on. It is never a good idea to spend so much time on a target that it is going to cost you too much time added on in the overall stage.

5 GREATEST CHALLENGE

The most challenging aspect of 3-Gun is that the stages are constantly changing and offering new challenges. You never shoot the same stage twice and never shoot from the same position. It challenges every aspect of a shooter's ability, from long accurate shots to close quick shots. The variety and positions are constantly changing, and that creates those challenges.

6 WHICH GUNS AND WHY

For our shotguns, we picked the Beretta 1301. It was important to not only pick a shotgun that cycled well and didn't jam, but it also had to fit us. We are 5 feet 4, and most shotguns are designed for a guy with long arms. The Beretta 1301 is adjustable to almost any sized frame.

We chose a Rock River LAR 15 R3 Competition rifle because they are very accurate. It also came with an ATI ad-





PHOTOS COURTESY OF LANNY BARNES

WE BELIEVE OUR GOOD PHYSICAL FITNESS WILL REALLY HELP US IN 3-GUN BECAUSE IT WILL CREATE LOWER HEART RATES AND QUICKER RECOVERY TIMES.

— LANNY BARNES



justable stock and that allowed us to fit the gun more specifically to us. That was a big draw.

For a pistol, we went with the Smith & Wesson M&P Pro Core. We've been very happy with its accuracy and how it has performed under so many conditions.

7 SUCCESS & INSPIRATION

I think each other's support and motivation have been instrumental in our success. We've been fortunate enough to have our training partner and biggest competition there every day. We push each other and support each other to reach a

higher level.

Our dad has also been very instrumental in our success. You can say he is our shooting coach. He is always thinking of new things and new ways of trying something or helping us to improve.

Jerry, Kay and Lena Miculek have also been role models for us and have moti-

vated us to try to reach a higher level in shooting.

8 GEAR

We use Burris Optics on our rifle, specifically the M-Tac, either 1-4 or 1-6, depending on the competition. We use ATI adjustable stocks for our AR's. We use Blade Tech belts, holsters and mag pouches. We use Geissele Triggers on our AR, specifically the 3-Gun model trigger. We use Fiocchi Ammunition for all three platforms: the Fiocchi .69 grain Sierra Match King, Fiocchi 147 grain 9mm, the Fiocchi Shooting Dynamic 12 gauge and the Fiocchi low-recoil slugs. We use Smith Optics Elite ballistic lenses to protect our eyes and help the targets stay sharp and crisp. **MSR**

TOP 5 MSR'S


MSR

MVP'S OF MSR'S



TOP FIVE MODERN SPORTING RIFLES

BY ABE ELIAS



Over time, our view of what a hunting rifle is has changed.

For more than a century, many of our advancements in hunting rifles came from military weapons and, most recently, the AR-15/M-16 family of firearms. As a result, when most people think about a “modern sporting rifle,” they picture the AR platform. We tend to see it as a bit broader than that because so many different innovations in cartridges, operating systems and materials have occurred in the new millennium.

How do you select the best? Narrowing the field down to the top five rifles of this era is virtually impossible. Thus, we looked at what we know really works and works well, providing sportsmen with the reliability and features needed for them to enjoy their pastime.

Here are five top rifles that are dependable and designed with the sportsman in mind.



From this angle you can see the regulator that allows you to adjust the Ruger SR-556 VT two-stage piston system. You can also see the stainless steel barrel and the crisp target crown Ruger uses.



Ruger provides a full-length flattop Picatinny rail on the SR 556 VT. It comes with a solid stock and a Magpul MOE Grip.

1 Ruger SR-556 VT

Ruger's SR-556 VT uses an AR platform with a two-stage piston system. It is available in 5.56 Nato/.223 Remington and uses a cold-hammer-forged 410 stainless steel barrel with 1 in 8 twist and target crown. The 1 in 8 twist provides the ability to use a range of bullets to hunt small to midsize game.

A stainless steel barrel helps deal with any number of weather conditions. The accuracy achieved with stainless steel barrels is well known and is a top choice among target shooters.

Ruger also provides a two-stage trigger with a short "take up" stage. Having a target-style

trigger adds to the accuracy achievable with this rifle and is far above most standard spec triggers. Adding a performance trigger to any rifle is well worth it, but on the SR-556 VT one comes standard.

Also standard on the SR-556 VT is a Magpul MOE grip, and this provides a more comfortable grip than the regular spec grips and makes it easier for you to hold on target while waiting to make your shot. An extended charging handle is added to this model, making it easier to reach when you have optics mounted.

For hunting, I don't find it a benefit to have a collapsible stock and often like the con-

venience of add-ons such as cheek rests with ammo pouches. The Ruger 556VT comes with a solid buttstock, which opens up a variety of choices for add-ons, such as cheek rest pieces to add height; as a result, you can better line your eyes up behind your optics and still maintain a solid cheek weld.

One of the things that makes the 556 VT stand out is Ruger's use of a two-stage piston system. I find piston systems very reliable because the extra added effect of the inertia of the piston coming back adds to the reliability of the gun's operation.

A piston system greatly reduces the fouling of the bolt

carrier group, and anything that can reduce the build up of dirt is a good thing. Ruger uses a chrome-lined piston and gas chamber for the first stage, making the rifle easier to clean. The urge to over-lubricate can cause trouble in cold weather, so use only a light coating of oil as the manual suggests.

One of the only issues I have with the 556 VT is that it comes only with a Picatinny rail at 12 o'clock. Granted, when hunting I don't have much need for the other rails, but to round out the package for those who are interested, it would be nice if Ruger also included rails for 3, 6 and 9 o'clock.

PURPOSE BUILT FOR
**EVERYDAY AND
EVERY MISSION**

BUILT WITH PERFORMANCE FABRICS
THAT ENHANCE FUNCTIONALITY,
DURABILITY, COMFORT AND RELIABILITY.
EXPLORE ALL OF OUR OUTERWARE GEAR
AND ACCESSORIES ONLINE.



**ALWAYS
BE READY.**

WWW.511TACTICAL.COM

VISIT WWW.511TACTICAL.COM/STORE-LOCATOR TO FIND A DEALER NEAR YOU

THE 5.11 TACTICAL®
**RAPID RESPONSE
QUARTER-ZIP**

LIGHTWEIGHT TACTICAL BASE LAYER

ZIPPERED SLEEVE POCKET
AND PATCH HOLDER
TWO-WAY STRETCH
FABRIC ON SHOULDERS
AND ARMS
MOISTURE WICKING,
QUICK DRYING KNIT BODY



QUARTER-ZIP FRONT FOR HEAT
MANAGEMENT
COMPRESSED FIT FOR
COMFORT AND FLEXIBILITY

© 2014 5.11, Inc. All rights reserved.



2 Remington MODEL R-15

Rather than just focus on one rifle, the R-15 series provides a number of different options for today's hunter. First off the R-15 is available in a number of MAX-1 HD camo patterns so you can find the one best suited to your hunting terrain.

The R-15 comes with fluted barrels to reduce weight and aid in faster cooling. All the models come in flattop configuration over the receiver so you can add your own optics.

Remington uses a crisp single-stage trigger to aid in accuracy. You have your choice of full-size rifles or carbine models. The R-15S has models chambered in three calibers: 450 Bushmaster, 204 Ruger and .223 Remington. The twist rate on the .223 Remington chambered barrels is 1:9. For those of you who desire the option to shoot heavier bullets, the 1:9 twist can be a drawback.

Remington has done a lot with the R-15 series to put together an AR-15 platform for

the hunter. Overall, the line has a lot of options that different hunters would desire, from collapsible stocks to armguard accessory rails.

A special model is the R-15 VTR Predator MOE. The VTR Predator is decked out in Magpul hardware and comes with a two-stage target trigger.

Finally, it has a solid track record of reliability. Normally, I would not put a whole line of rifles in at one spot, but the basic format is the same and there are too many option variations to split them up.

3 Benelli R1

Benelli's R1 rifle comes into the group because it offers a number of calibers for big game. Also, for those of you who would raise an eyebrow because it is not an AR-format rifle: it is the only rifle in the top five that has been NATO-qualified.

The R1 is chambered in three calibers for the big game hunter: 30-06 Springfield, .300 Win Mag and .338 Win Mag. Over the years I have seen a number of big game hunters dabble in the two larger of the



The full camouflage version of the M&P 10 comes with a stainless steel barrel. The flattop configuration allows you to tailor your optics to the particular game you are hunting.



Shown here is Benelli's R1 rifle with a camo Comfortech stock. You can see the interchangeable cheek rests and butt pad in black. The chevrons on the side tell you it is a Comfortech stock. This version comes with a rail mounted on the receiver for mounting optics.



Shown here is an R1 with a black synthetic Comfortech stock and iron-sight-mounted. All Comfortech stocks come with interchangeable butt pads to adjust length of pull. They also come with interchangeable cheek pieces, which allow you to change the height that your head rests on the stock.

three calibers, only to watch them return a rifle to the store, with the only rounds missing from their first box being the ones they used to target the rifle in. Often, it was because the kick of the rifle was more than they had anticipated. Benelli deals with this issue through the design of their Comfortech stock, which greatly reduces the effect of the recoil. Benelli's Comfortech system comes with three different recoil pads for adjusting pull length and three different comb inserts for adjusting

cheek rest height.

Three different styles of stocks are available with the R1: walnut, black synthetic and Realtree All-Purpose Green (APG). Helping to reduce the perceived effect of the recoil is the Auto Regulated Gas Operated (ARGO) piston-driven system. Again, as with the SR 556 VT, a piston system provides reliability in operation.

Other features of the R1 are that it comes with a detachable magazine and uses a rotary bolt system. Further ex-

panding the platform, you can also interchange barrels and get barrels chambered in .270 and .308.

Benelli's R1 is more of a modern sporting rifle for someone who wants something looking a bit more traditional. Even with a traditional look, it doesn't lose any ground in modern features and function.

4 LWRC International SIX8 6.8-SPR

LWRC makes a solid, dependable product. On a

number of occasions I have had the pleasure of running one of the company's rifles. Taking a bit of an outside of the box approach, LWRC has put a lot of work into offering a 6.8 mm SPC line. The SIX8 line has three models in it, but for a sporting rifle I chose the SIX8 6.8-SPR.

The 6.8-SPR is a short-stroke gas-piston-operated system. LWRC worked with Magpul to develop a magazine for the 6.8mm SPC round and then started making receivers specifically to accommodate



A right side view of the LWRC SIX8-SPC shows the ambidextrous controls, safety and bolt release. You can also see the Magpul magazine that was developed for the 6.8mm x 43mm SPC.

the round. The short-stroke piston system allows for reliable operation.

Developed as a round to replace the 5.56mm NATO and make up for its shortcomings, the 6.8mm x 43mm SPC round delivers a larger bullet with minimal sacrifice of extra weight and space over the 5.56mm NATO. Since its inception, it has been gaining popularity in the civilian market resulting in a growth in demand for firearms chambered in this round.

The 6.8mm SPC round itself delivers more lethality at short and longer ranges than

does the 5.56mm NATO. Bullet sizes for the round range from 90 grains to 115 grains. This will allow for more effective small game shooting and midsize hunting such as deer and wild hog. The cartridge is already popular among hog hunters.

Of note, the SIX8-SPC doesn't leave the left-handed hunter in the lurch, being ambidextrous in operation. Some of the furniture on the SIX8 includes a Magpul MIAD grip and with Magpul MBUS folding sights. LWRC makes a good solid product you can depend on.

5 Smith & Wesson M&P 10

The Smith & Wesson M&P 10 camo is chambered in 7.62 NATO/.308 Winchester and relies on a mid-length, gas-operated system. Built for ambidextrous operation, the rifle comes with an ambidextrous magazine release, bolt catch and reversible safety selector.

Furniture on the M&P 10 is a Magpul MOE rifle stock. The bolt carrier, gas key and firing pin are chromed. Smith and Wesson uses a 1:10 twist for the barrel with 5R rifling. 5R rifling has five lands and

five grooves.

The major difference between ordinary rifling and 5R is that the sidewalls of the lands are slanted on the 5R as they form the grooves. This slant creates a more open angle where the side land meets the floor of the groove. An open angle at that point makes it less likely to foul and easier to clean.

Chambering in 7.62 / .308 gives you a versatile round for mid- to large-size game and extends the reach of the platform compared to the 5.56 NATO round. A total flattop, the M&P 10 gives



The Six8-SPC model by LWRC comes as a total flattop, allowing you to create your own system. Shown here are flip-up BUIS sights by LWRC. You can easily add a co-witness mount and use a reflex sight or fold the sights down and use a scope.



Some versions of the Smith & Wesson M&P10 come with collapsible stocks. S&W has an integrated Picatinny rail built on the front gas block so you can mount a front sight.

HONORABLE MENTIONS

IWI TRAVOR

In the past, we have seen a number of sporting rifles come out in carbine versions providing a short, light, fast and more-nimble firearm. The need for these firearms in smaller packages was to let hunters to have a lighter carry, allowing them to move quicker while stalking. Smaller, lighter guns are also quicker to the shoulder and get off an accurate shot, even in tight brush.

What better suits these requirements

in today's modern firearms than a bullpup design? Much like the ARs were not originally thought of as hunting rifles, eventually we will see the bullpup design find its place in hunting with certain game and terrain.

SR-7.62 RUGER

This is included for obvious reasons: it possesses the same features as the SR-5.56 but is chambered in the 7.62/.308.

R25 REMINGTON

Likewise, the Remington R25 is chambered in .243 Winchester, 7mm-08 Remington and .308 Winchester, broadening the selection of loads you can use.



The IWI TAVOR is a well-made, reliable bullpup rifle. As long as it fits the legal requirements of your state, I can't see any reason why the TAVOR won't eventually find its place among hunters. It would be great for hunting small-to-midsized game in tight brush.



CONTINUED FROM PAGE 28

you flexibility to position your optics. The rifle even has an integrated Picatinny rail on the gas block, extending your sight radius past the receiver if you choose to use flip-up sights. Depending on what you are hunting, you can go with a reflex sight or mount a scope.

The M&P line has a good reputation and has provided people with hours of reliable shooting. It would be easy to build on this reliable platform with a number of upgrades of your choosing, or just add some sights and take it hunting.

SEA OF CHOICES

There is literally a sea of modern sporting rifles out there from a vast number of producers. Like the rifles that came before them, we can't expect just one to meet all our demands, nor would we want one to. With so many accessories and aftermarket add-ons, you can build up almost any platform. Today's modern rifles provide us with a number of advantages if we can just overcome the not-so-simple challenge of picking one. **MSR**

THE AUTHOR: A Canadian resident, Abe Elias writes regularly for Engaged Media. He is the owner of Diving Sparrow Knife Works.



Find Your Range

WWW.SILENCERCO.COM

HOW-TO

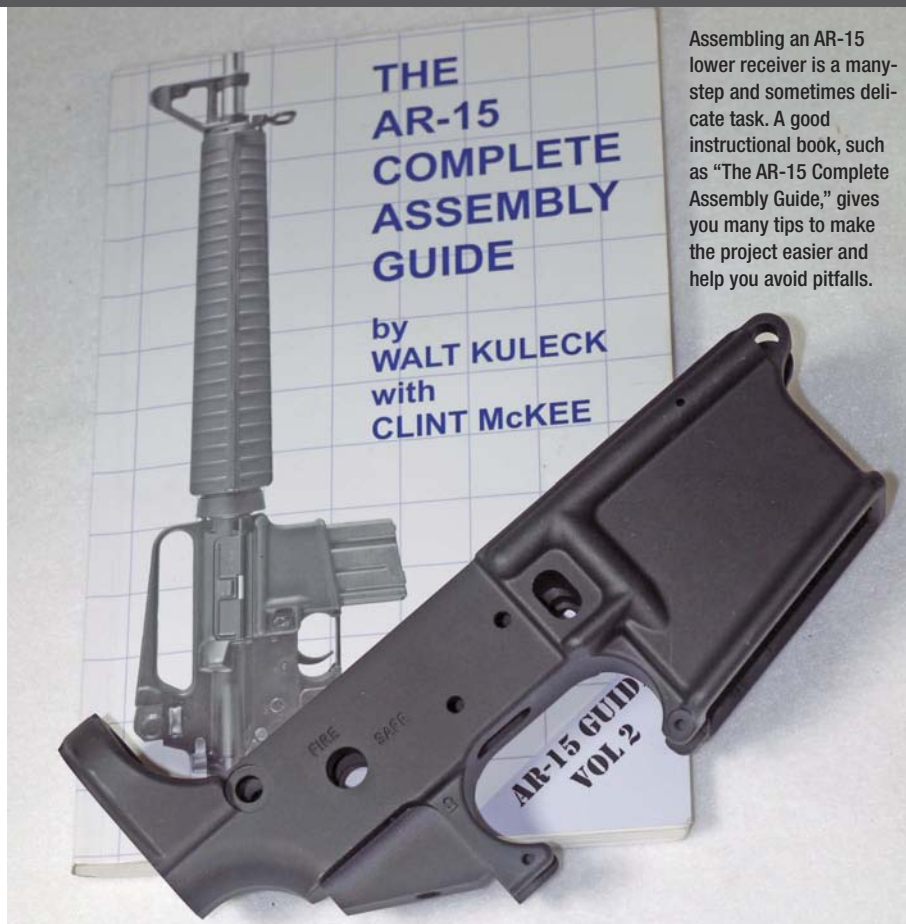
MSR

TAILORED TO YOUR DESIRES



A PRIMER ON ASSEMBLING A LOWER RECEIVER

STORY AND PHOTOS BY STAN SKINNER



Assembling an AR-15 lower receiver is a many-step and sometimes delicate task. A good instructional book, such as “The AR-15 Complete Assembly Guide,” gives you many tips to make the project easier and help you avoid pitfalls.

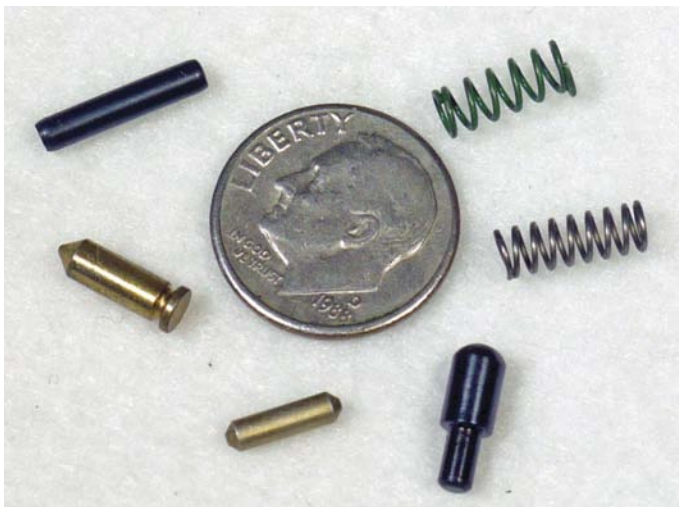
It's deeply ingrained in the American psyche to tweak, modify and customize our toys, so it's not surprising that the AR-15 platform lies close to the hearts of many American shooters.

You can pick and choose among dozens of options to deck out your AR — collapsible or fixed stocks with added cheekpieces and storage compartments; heavy-bull barrels, carbine barrels, long or short, with or without flash hiders. There are iron sights, fixed or detachable; fore ends with or without a Picatinny rail; chamberings from .22 long rifle to .50 Beowulf — and the list goes on.

Following is your road map to customizing an AR-15.

AN ENTICING FEATURE

Perhaps the most enticing thing



LEFT: Your AR-15 parts kit contains many small bits such as these. Put them in a convenient container to avoid them falling on the floor and getting lost. **RIGHT:** These “ears” at the rear of the trigger guard recess are fragile. If you break one while you’re assembling the hinged trigger guard, you’re done for the day and you need a new lower receiver.

about the AR-15 is that you can build it almost from scratch. You can start with a stripped lower receiver and parts kit and put it together, adding stock or custom components to your heart’s desire. When you’re finished, you have a better understanding of how an AR-15 functions and the satisfaction of knowing you did it yourself. No gunsmith is required.

When you’ve completed your lower, you can move on to a stripped upper receiver, adding a barrel (long or short, heavy or pencil-thin), bolt carrier assembly and numerous other options until your finished AR-15 is truly tailored to your wants and desires.

Here I’ll focus on that first basic step, assembling an AR-15 lower receiver. It’s a project that can take a couple of hours or a whole afternoon, depending on how skilled you are with simple hand tools.

That isn’t to say that it’s a simple task, it’s not. However, it is manageable for a person with normal manual dexterity and an ability to follow written instructions.

BEFORE YOU START

You need to start with a good, detailed guide to assembling your lower. I chose “The AR-15 Complete Assembly Guide” by Walt Kuleck with Clint McKee. This book is available online.

Your second step should be to acquire a few specialized tools that will make your project much easier. I created a list for the sidebar on this page. Don’t be overwhelmed by this list. I can assure you that you’ll need these tools again because, like Lay’s potato chips, you can’t do just one. It’s fun, and you’ll want to build another and another.

Additional tools you’ll need are general purpose tools

commonly found in the home or shop.

NOW TO BEGIN

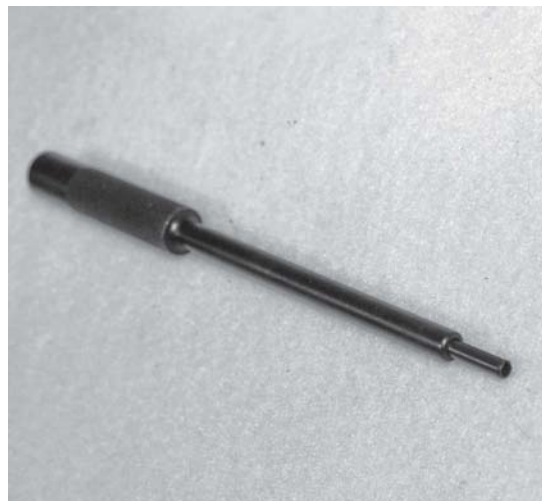
Of course, you’ll need a stripped receiver. These are available from a variety of sources, including your local gun show. This is the only component of an AR-15 that is serial numbered and considered by the Bureau of Alcohol, Tobacco, Firearms and Explosives to be a firearm. This means buying it through a federal firearms license holder, filling out Form 4473 and complying with additional federal government requirements.

In addition, you’ll need a lower receiver parts kit, which is available from many sources, including Brownell’s, Midway USA, Cabela’s and Bass Pro Shops.

One last item you’ll need is a buttstock assembly. You can use one of several fixed types,

SPECIAL TOOLS YOU’LL NEED

- Set of roll pin starter punches
- Set of roll pin punches
- Set of center punches
- AR combo wrench
- AR magazine well block
- Plastic or rawhide mallet
- Pivot pin installation tool (this usually comes with lower receiver parts kit)



CLOCKWISE: Many custom collapsible buttstocks are available. This one by MagPul (shown here with a buffer and buffer spring) is a relatively inexpensive option instead of a standard military-issue-type. • Roll pins used in assembling your AR-15 lower are tiny and difficult to manage without a roll pin holder punch to help get them started properly. • The rice-grain-sized forward pivot detent is spring-loaded and capable of launching at warp speed into another dimension. Another specialized tool is necessary here, a pivot pin installation tool. It should come with your AR-15 parts kit. • Your parts kit should contain two tiny detents that keep your pivot and takedown pins captive and attached to your lower. A few spares only cost \$3–4. It's good insurance.

including a government-issue type A2 and the MagPul MOE. A host of collapsible choices are yours to pick from. You can go with an inexpensive standard six-position government-issue type or fancy types with cheekpiece enhancements and other refinements.

Just remember this: If you go whole hog with all the bells and whistles, you can add

several hundred dollars to the cost of building your personalized AR-15.

DON'T BE HASTY

The natural inclination is to wade right in and start. Instead, take a step back and look things over.

First, your parts kit contains many small springs and rice-grain-sized parts. Be sure you place them in a suitable

container that prevents them from rolling off your workspace and disappearing forever into a crack in the linoleum.

Second, read your assembly instructions carefully. It will offer a number of suggestions that will make your project go smoother in the coming couple of hours.

Third, wear safety glasses. You will work with small metal

objects under considerable spring pressure. A miscue can cause them to launch into another dimension, never to be found, or they can penetrate an eyeball in a flash and could potentially compromise the continued function of a cornea, retina, etc.

SMALL METAL PARTS

In your parts kit are two small steel objects that are

PERHAPS THE MOST ENTICING THING ABOUT THE AR-15 IS THAT YOU CAN BUILD IT ALMOST FROM SCRATCH.

literally the size of a grain of rice. They are called the take-down pin detent and the safety detent. They are identical and interchangeable. At least one of them is guaranteed to launch into orbit unless you have the manual dexterity of a brain surgeon. Do yourself a favor and spend two or three bucks for a half-dozen spares. Trust me, you'll need them.

ON TO THE GOOD PART

By now you should have read the step-by-step instructions carefully and should

have performed a few little tasks to ensure smooth sailing. You should also have a good lubricant such as Tetra Gun at hand to slick things up a bit here and there.

Proceed with care, because it is possible to muck things up if you take the gorilla approach. A good example is in your first assembly step — installing the trigger guard assembly. This part is designed to hinge open, permitting you to press the trigger while wearing heavy, cold weather gloves.

Your task is to insert this

piece between a pair of “ears” on the lower receiver at the rear of the trigger guard. This involves starting a roll pin into the attachment holes and tapping it into place with a roll pin punch and a mallet. These ears are somewhat fragile. If you break one off, do not pass “go” and do not collect \$200. Just heave a heavy sigh of frustration and go shopping for a new lower receiver. You are done for the day.

MOVE FORWARD

Have I scared you off?

Don't be deterred by my dire warnings. Assembling an AR-15 lower receiver is easily doable.

It takes many steps and requires you to work with (sometimes) tiny parts and worm them into position. It takes more than a slap and a tickle to complete, but that's where you get your sense of accomplishment and pride that this AR-15 is yours far more than a Form 4473 and a credit card can ever give you.

Do it. You know you want to. **MSR**



BALANCE OF POWER

Compact, Comfortable, Accurate.

The Tavor® SAR was developed in close cooperation with the Israel Defense Forces. Now available in the USA for the first time, the TAVOR SAR features an optimized ergonomic design with short rifle convenience and long rifle accuracy.

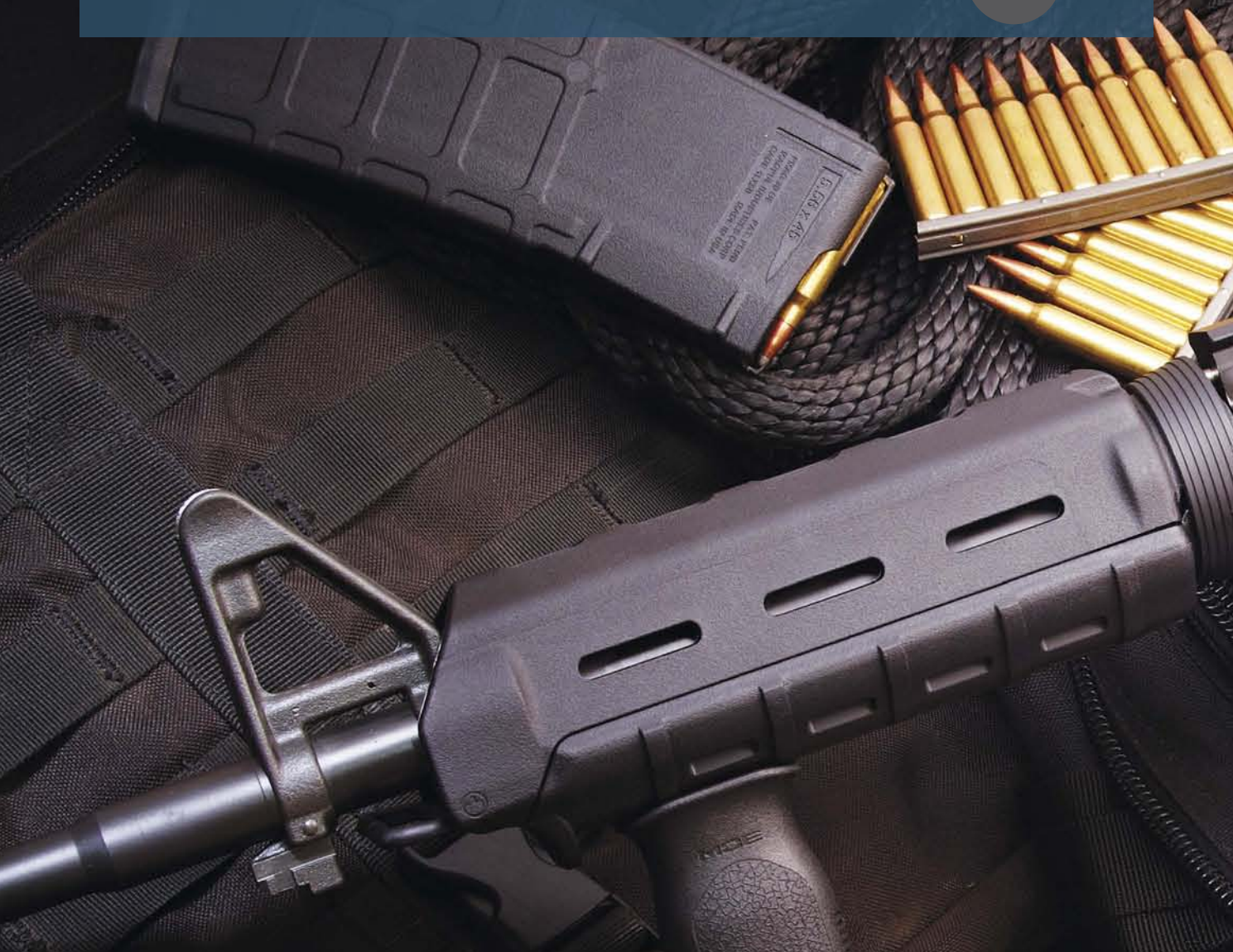
Balance the Power in your hands today!



IWI US, Inc.
info@iwi.us
www.iwi.us

HOME DEFENSE

MSR



HOME DEFENDER



COLT SLIGHTLY MODIFIED ITS ICONIC AR-15 & THE 50-YEAR-OLD FIREARM IS A DEFENSIVE BEAST

STORY AND PHOTOS BY TERRILL HOFFMAN

The AR-15 and its variants can run the gauntlet from field to sports to self-defense. After 50 years you would expect a design to be fading, but the AR is just starting to find its pace.





↑ **TOP:** The basic design of the new Colt is the same proven pattern used for the past 50 years. It works as well today as it did in the 1960s. **BOTTOM LEFT TO RIGHT:** The Magpul buttstock provides slots for mounting a sling but, more importantly, it protects the release lever from unexpected activation. • Once the traditional carry handle gave way to the Picatinny rail, mounting scopes and other sighting systems became a cinch. • Magpul provides the rear sight, which has dual apertures and windage adjustments. It will fold down out of the way of optics or can be completely removed.

To ensure your home defense is as strong as possible, you want a “line-up” of defensive firearms that will deliver, and this Colt is an “All-Star.”

THE SPECS

Producing an M4 variant of AR-15 is nothing new for Colt, but the company has gone one step farther with its

LE6920MP-B. Colt has teamed with Magpul Industries to produce a carbine with the most sought after accessories straight from the factory.

The only visible difference in the lower receiver is the Magpul trigger guard and pistol grip. The MOE Trigger Guard is rounded for those wearing gloves for tactical

purposes or winter wear. The MOE Grip provides an ergonomic, hand-filling design combining aggressive texturing with storage capability.

Unseen are the “M4 cuts” that mate with the matching cuts on the barrel extension to improve feeding. The upper receiver is of the flattop design where the carry handle has

been replaced with the Picatinny rail system. Traditionalist may favor the carry handle, but for the ease of mounting optics, the Picatinny rail is the only way to go.

The Colt M4 uses the direct gas impingement system that has worked for 50 years. This system did away with the gas cylinder, piston and operating



TO ENSURE YOUR HOME DEFENSE IS AS STRONG AS POSSIBLE, YOU WANT A 'LINE-UP' OF DEFENSIVE FIREARMS THAT WILL DELIVER...

rod assembly of its predecessor, the M14. The change saved weight, lowered costs and reduced the mass of the operating parts.

The barrel is 16.1 inches long, chrome-lined and chambered in 5.56 NATO. The 1-in-7-inches twist rate has proved itself with the various heavier bullets that have increased the terminal performance of this caliber. Capping the barrel is the birdcage style of flash suppressor. It still does an outstanding job of venting gases upward, while preventing downward gas from kicking up dust when the carbine is fired in the prone position.

The front sight is mounted in the traditional tower and is adjustable for elevation. The fold-down

Magpul dual-aperture rear sight will handle any needed windage adjustments. The fold-down feature allows for any needed clearance when optics are used.

The Magpul MOE Hand Guard combines light weight with a modular flexibility. Slots at the 2-, 6- and 10-o'clock positions allow the attachment of optional Picatinny rail sections when needed for the mounting of tactical lights, slings and other accessories. The lower lip on the front extension provides additional protection from hot front sight assembly. The Colt M4 is also supplied with the MVG, Magpul's vertical fore grip. This light-weight grip attaches to

the MOE hand guard without the need for an additional rail section.

The Magpul MOE Stock is designed for light, fast action, and the A-frame profile avoids snagging and shields the release latch to prevent accidental activation. To complete the package, each Colt LE6920MP-B comes packaged with two PMAG 30-round magazines.

STILL GOING STRONG

The AR-15, in all of its variants, is the hottest firearm on the market. Colt started it, and it is as good today as it was 50 years ago. You can also rest assured that home defense is that much stronger with this AR. **MSR**

THE SWEET SPECIFICATIONS

MANUFACTURER Colt's Manufacturing Co. LLC
ACTION TYPE Direct Gas Impingement
CALIBER 5.56 NATO
MAGAZINE (2) 30 Round PMAG
BARREL 16.1 inches, 1-7 twist chrome plated
SIGHTS Post Front, Magpul Rear
OVERALL LENGTH 35.5 (buttstock extended)
WIDTH 6.9 pounds
STOCK Magpul MOE handguard and buttstock
MSRP: \$1,229

FIND THEM HERE

Colt's Manufacturing Co. LLC
P.O. Box 1868
Hartford, CT 06144
(800) 962-2658
Colt.com

TACTICAL LIGHTS

MSR

LIGHT YOUR WAY



DIAL UP THE BRIGHTNESS WITH THESE ACCESSORIES

BY DEVLIN SMITH



Many factors can impact the amount of light you have available for shooting, including time of day and weather. By installing a lightweight, durable tactical light on your rifle, you can take control of the amount and intensity of the light you need in any situation.

Brite-Strike

PRODUCT: RIGHT-MHLS

WEBSITE: Brite-Strike.com

This rechargeable AC/DC tactical light delivers up to 600 lumens of brilliant white light. It features a compression seal that rotates down over the charging port to make the light 100-percent waterproof. This Cree LED light is operated using a Tactical Blue Dot Switch.



MSRP: \$250

SPECIFICATIONS

- **LENGTH:** 6.25 inches
- **RUNTIME:** 2 hours on high, 8 hours on low, 2.5 hours on strobe

SureFire

PRODUCT: M600V and M620V Scout Lights

WEBSITE: SureFire.com

These flashlights are constructed from aerospace aluminum, are coated with Mil-Spec hard anodizing, and O-ring and gasket sealed for weatherproofing. They feature selectable LED heads that generate both white-light and infrared illumination.



MSRP: \$485 for the M600V (pictured), \$595 for M620V

SPECIFICATIONS

- LENGTH:** 4.1 inches for M600V, 5.4 inches for M620V
- WEIGHT:** 5.1 ounces for M600V, 6.1 ounces for M620V
- Runtime:** 1.8 hours for both

ExtremeBeam

PRODUCT: S.A.R. Series Flashlights

WEBSITE: ExtremeBeam.com

Powered by a 130-lumen LED bulb, the S.A.R. Series flashlights project light up to 450 feet. The flashlights are machined from bar stock aluminum. They feature tri-cut glass for additional durability, square-cut threads to ensure they are never cross-threaded and a micro-textured body that creates a sharkskin feel to retain a solid grip even when wet. The S.A.R. 5 is available in gray. The S.A.R. 7 is available with ExtremeBeam's anti-glare black stealth coating.



MSRP: \$250

SPECIFICATIONS

- **LENGTH:** 3.15 inches
- **WEIGHT:** 2.1 ounces
- **AVERAGE RUNTIME:** 1 hour



ExtremeBeam

PRODUCT: TAC24 SWAT Flashlight

WEBSITE: ExtremeBeam.com

The TAC24 S.W.A.T. features a 235-lumen bulb that projects up to 1,300 feet in a single, high-intensity mode. It is machined from solid bar aluminum and is micro-textured to create a sharkskin feel that retains a solid grip when wet.



MSRP: \$99.95

SPECIFICATIONS

LENGTH: 6.25 inches

WEIGHT: 6.6 ounces

AVERAGE RUNTIME:
7 hours

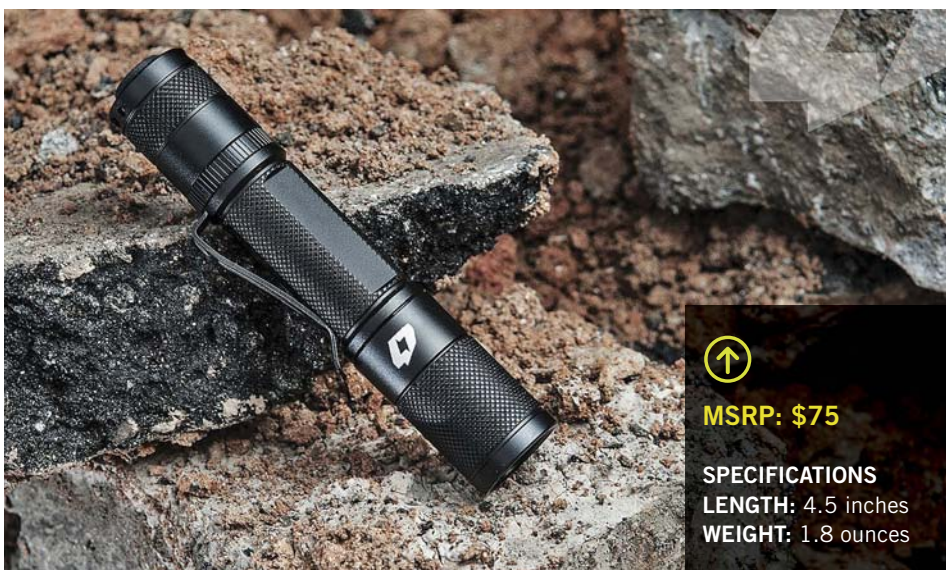
Foursevens

PRODUCT: Quark Tactical

QT2L-X With Burst Mode

WEBSITE: Foursevens.com

This flashlight delivers 780 lumens of output for the first minute on the max setting, then ramps down over the next 30 seconds to 50 percent of the original output. The water-proof flashlight features an aircraft-grade aluminum body and impact-resistant lenses.



MSRP: \$75

SPECIFICATIONS

LENGTH: 4.5 inches

WEIGHT: 1.8 ounces

SureFire

PRODUCT: M600 and M620
Ultra Scout Lights

WEBSITE: SureFire.com

These Ultra Scout Lights deliver 500 lumens via a higher-output LED and a beam-shaping optic. They feature a high-efficiency Total Internal Reflection lens that creates a beam with reach and surround light to accommodate peripheral vision. The lights have a weatherproof Mil-Spec-anodized aluminum body.



MSRP: \$69.95
for XT8
ProRanger,
\$79.95 for XT8
Strobe

SPECIFICATIONS

WEIGHT: 5.6 ounces
for M600, 6.5
ounces for M620

RUNTIME: 1.5 hours
for both



EcoGearFX

PRODUCT: T6

WEBSITE: EcoGearFX.com

The T6 LED flashlight delivers 1,500 lumens of brightness in five modes and also offers a zoom function. Constructed of aluminum alloy and featuring a hard-anodized finish, the flashlight is water-resistant, anti-abrasive and shockproof.



MSRP: \$250

SPECIFICATIONS

- Rechargeable but can also run on three AAA batteries
- Five light modes

ExtremeBeam

PRODUCT: XT8 Flashlight

WEBSITE: ExtremeBeam.com

XT8 flashlights are offered in the single-mode 210-lumen ProRanger model and the multi-mode 200-lumen Strobe model. Both are available with a law-enforcement-style raised momentary switch or a military-style, shoulder-protected momentary switch. They are slow-machined from solid-bar aluminum and feature a micro-textured grip and square-cut threads.



MSRP: \$69.95 for XT8 ProRanger, \$79.95 for XT8 Strobe

SPECIFICATIONS

LENGTH: 5.4 inches
WEIGHT: 5.62 ounces
AVERAGE RUNTIME: 7 hours

MSRP: \$389 for X300V, \$875 for X400V IRc

SPECIFICATIONS

LENGTH: 4 inches for both
WEIGHT: 3.9 ounces for X300V, 4.8 ounces for X400V IRc
AVERAGE RUNTIME: 1.8 hours for both



SureFire

PRODUCT: X300V and X400V IRc WeaponLights

WEBSITE: SureFire.com

The X300V and X400V IRc lights feature a V-Series head, which is a sealed, selectable head that contains both white-light and infrared LEDs. The combination accommodates missions requiring visible and virtually non-visible illumination. Both lights deliver 150 lumens on the white-light setting and 120 mW of infrared illumination in the IR mode. The X400V IRc also features an infrared laser sight. The lights are constructed of hard-anodized lightweight aerospace aluminum with a Mil-Spec finish. **MSR**



GUN TEST

MSR

The Mk. 3 is a full-size rifle designed to hunt full-size game. CMMG made sure you have the perfect weapon for stalking deer or enjoying time at the range.

REFINED 10



**CMMG'S MK. 3 IS ALL ABOUT QUALITY AND
POWER FOR THE FIELD**

STORY AND PHOTOS BY TERRILL HOFFMAN





TOP: The AP-10 is a true example of “form follows function.” The Mk.3 has every feature needed to provide the sportsman a capable big game rifle and can be considered a poster child for the concept of “modern sporting rifle.” **BELOW:** If you are comfortable using an AR-15, there won’t be any surprises for you once you step up to the Mk.3. Both the upper and lower billet receivers are



beefed up to handle the .308 Win., but all of the controls are the same.



DID YOU KNOW?

The term “modern sporting rifle” has only been in widespread use for the past five years, yet the firearms the phrase depicts have been in production for more than five decades.

Life is full of twist and turns. Seldom can the path forward be considered a straight line. Nowhere is this more evident than in the firearms market and the rifle known as the AR-10. Just review the product line of CMMG Inc. Similar to the other major AR-15 manufacturers, it is now producing models of the AR-10. In the case of CMMG, its rifle is the Mk. 3, available

in five variations based on the LR308 pattern, and I tested it.

FIRST, SOME HISTORY

To new shooters, the Mk. 3 may seem like an AR-15 on steroids. To appreciate the irony involved with all AR-10-patterned rifles, you must look back in history to the 1950s.

That decade may seem like the dark ages in our current era

of iPhones, Wi-Fi and tablets, but for the evolution of firearms it should be considered a golden age. A book could be written on the subject, and probably has, but the highlights should suffice for our purposes.

In the early 1950s, our military wanted to replace the M1 Garand and its 30-06 cartridge. This brought about the introduction of the .308 Winchester

cartridge, which was soon followed by the adoption of the M14 battle rifle. At that time, a new company by the name of Armalite rushed a couple of rifles into the military trials but failed to win acceptance. These rifles were the original AR-10s chambered in the then-new .308 Winchester.

It was the late 1950s and early 1960s that saw the AR-



10 being converted into the smaller AR-15 chambered for the new .223 Remington (5.56 NATO) round. As we all know, this rifle and cartridge combination won the next round of military trials and became the M16. Since that time, the AR-15/M16 has served as the main battle rifle for the U.S. military for some 50 years and has gone through several transformations to evolve into the current M4 pattern so popular today.

You might have expected the AR-10 to fade into history, but it is the popularity of its offspring, the AR-15, that has brought about the resurgence of the larger rifles such as the Mk. 3.

UNDER THE HOOD

CMMG has long been known for the quality of its AR-15s, and has carried this level of quality over to the Mk. 3. The company also carried over the various refinements developed for the AR-15 to the larger Mk.3 to where there is little resemblance to the original AR-10 created by Armalite.

The Mk. 3 is the basic model of CMMG's five variations, but like all of the models, it is built around a set of billet 6061-T6 aluminum receivers. The upper receiver is of a flattop design and has a dust cover, but it does not have the forward assist found on most ARs.

The upper is mated to an 18-

inch stainless steel barrel with a heavy-taper profile and a 1:10 twist rate. The rifle operates with the standard direct-gas-impingement system and a low-profile gas block mates to a rifle length gas tube. The barrel is capped with an A2 birdcage-style flash hider/compensator.

Along with the flattop design, the Mk. 3 also incorporates another improvement developed for the AR-15, the free-floated handguard. The Mk.3 has CMMG's RKM15 KeyMod handguard which, as its name would imply, is 15 inches long and covers the gas system and all but the last 3 inches of the barrel. The KeyMod handguard continues the top Picatinny rail

SPECS

CMMG Inc.

MODEL: Mk. 3

CALIBER: .308 Winchester

LENGTH: 39 Inches

WEIGHT: 9.3 pounds
(unloaded)

BARREL: 18 inches
416 Stainless Steel

TWIST: 1 in 10

RECEIVERS: Billet 6061-T6
aluminum

STOCK: A1-Length Fixed

PISTOL GRIP: A2 Style

SIGHTS: None

MUZZLE TREATMENT: A2 Flash
Hider/Compensator

HANDGUARD: CMMG RKM15
KeyMod

MSRP: \$1,599.95



TOP: Even though you can attach rail sections all the way down the handguard, it was the lack of rails that I found comfortable. The 15-inch length ensures you have plenty of room to grip the rifle and the gas system stays protected. **RIGHT:** The amount of additional width to the Mk.3 over an AR-15 is barely noticeable but the increase in power is substantial. The .308 is ideal for medium-size big game and has been one of the favorite rounds for match shooters. Pick a particular situation and there may be a better cartridge choice, but combine all your needs and few rounds can match the versatility of the .308 Winchester.

found on the upper receiver and also allows the attachment of additional rail sections at the 3-, 6- and 9-o'clock positions. The lower receiver has an enlarged magazine well to accommodate .308 Magpul PMAGs.

All controls operate the same as you would find on a standard AR-15. A standard single-stage Mil-Spec trigger assembly and AR-15 safety selector are also housed in the lower receiver. The furniture use on the Mk.3 is an A2 pistol grip and an A1 buttstock.

The overall length of the rifle is 39 inches and the weight of the rifle unloaded is 9.3 pounds. The feature of the Mk.3 that cannot be described

in simple specifications is the smooth matching anodized finish found on all parts except the matte stainless barrel. The quality of the machining and smoothing operation of the rifle are also hard to list on a simple spec sheet.

.308 WINCHESTER

After 50 years of the AR-15, and its total acceptance into the sporting world, you may wonder what has prompted the surge in new models of the AR-10. There is one simple answer — the .308 Winchester.

As much popularity as the AR-15 has garnered over the years, in the sporting world its 5.56 NATO round has always

been considered nothing more than a “varmint” cartridge. In fact, many states will not even allow it to be used on the No. 1 game animal in the United States, the whitetail deer.

At the same time, the .308 Winchester has flourished ever since its introduction in 1952 as one of the most-versatile game cartridges ever invented. The round has also been the primary sniper round for the military during this same time period.

The M14 may have been replaced by the AR-15, but its .308 Winchester round justifies the extra weight and bulk of the AR-10. Typical .30-caliber bullets for the .308 will range from 150–185 grains in





TOP: One of the greatest improvements to the AR over the years has been the advent of the flattop receiver. Mate that receiver to the Picatinny top rail of the hand guard and there is more than 22 inches of space to mount sights, optics or anything else you can think of. **LEFT:** On the right side of the upper receiver you will find the standard dust cover but you won't find a forward assist. I have never had a need for the forward assist but I do value the protection of the dust cover. When sitting in the rifle rack of an ATV it seems as if the ejection port is a magnet for dirt and grime.

THIS IS NOT THE FIRST TIME I HAVE SEEN A RIFLE SHOOT BETTER AFTER A FEW ROUNDS, AND A THIRD TRIP TO THE RANGE PROVED THESE IMPROVED GROUPINGS WERE NOT A FLUKE.

weight, but for a comparison to the 5.56 NATO, I will just pick the most common weight of 165 grains. This round will produce a typical velocity of 2,700 fps and an energy level of 2,670 ft./lbs., which greatly overshadows the 62-grain weight and 1,303 ft. /lbs. of the typical 5.56/.223 cartridge. These statistics prove the .308

Win. is a good choice for all but the largest game animals found in North America. To promote the round even further, it has been proven to have an intrinsic level of accuracy.

RANGE TIME

Prior to heading to my range to test the function and accuracy level of the new Mk.3, I re-

quested a sample M-308 4-16 x 42 Nikon scope. This scope includes the BDC (bullet drop compensator) reticle specifically set up for the 800-yard effective range of the .308. The scope also came equipped with the Nikon 308 series mount designed for the AR rail system. Mounting optics to a flattop AR is easy enough, but the Nikon

mount makes it even easier and places the scope at the right height for most shooters.

My first range session with the Mk.3 proved to be non-eventful. After firing three types of ammunition, I can say that function proved to be 100 percent successful. However, I was somewhat disappointed with the accuracy level of the sample

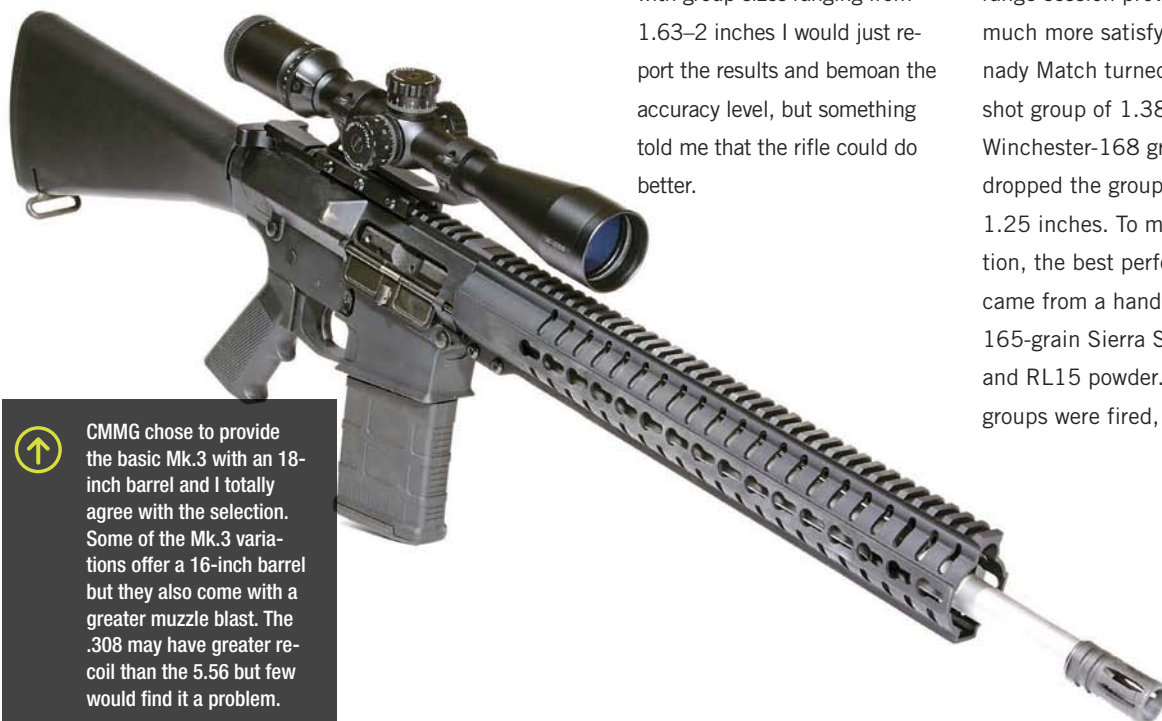


The only real difference between an AR-10 and the standard AR-15 is mass. The operation and break down are the same but the AR-10 is sized for the larger .308 Winchester.



rifle. The best five-shot group of the day was fired with Hornady 168-grain Match but it only measured 1.63 inches. Normally, with group sizes ranging from 1.63–2 inches I would just report the results and bemoan the accuracy level, but something told me that the rifle could do better.

After calling it a day, I retired and cleaned the rifle while planning to return to the range several days later. The second range session proved to be much more satisfying. The Hornady Match turned in a five-shot group of 1.38 inches and Winchester-168 grain Match dropped the group size down to 1.25 inches. To my satisfaction, the best performance came from a handload using 165-grain Sierra SBT #2145 and RL15 powder. Three groups were fired, and they



CMMG chose to provide the basic Mk.3 with an 18-inch barrel and I totally agree with the selection. Some of the Mk.3 variations offer a 16-inch barrel but they also come with a greater muzzle blast. The .308 may have greater recoil than the 5.56 but few would find it a problem.

FROM THE RANGE PERFORMANCE RESULTS

LOAD	VELOCITY	ACCURACY
Hornady 168 gr. Match	2,577	1.37 inches
Winchester 168 gr. Match	2,608	1.25 inches
Sierra 165gr. Handload	2,685	0.81 inches

Notes: Bullet weight measured in grains, velocity is average of 10 shots in fps measured 10 feet from muzzle, and accuracy in inches for the best five-shot group at 100 yards



TOP: Compare the .308 cartridge and its 20 round magazine to a 5.56 NATO cartridge with its 20 round magazine and you can see the need for the enlarged mass of the AR-10. Let's just say this is a case where size does matter.

RIGHT: All of the attributes of the AR-10 are based on one factor, the .308 Winchester. There is a slight reduction in velocity from the 5.56 NATO but the vast increase in mass and energy more than compensates. This basic cartridge has been a success on the battlefield but has also found a home with the American sportsman. It took a while for the resurgence of the AR-10 but the .308 has been a success since its introduction.



measured .81, .81 and .94 inches. To make these results even better, the Sierra GameKing bullets have given me excellent results on deer and are inexpensive in comparison to other quality game bullets.

This is not the first time I have seen a rifle shoot better after a few rounds, and a third trip to the range proved these improved groupings were not a fluke. Because I did not take velocity readings on my third trip, the data shown in the performance chart are all from the second range session.

The trigger was very smooth with a slight take-up before breaking at 5.5 pounds. This is heavier than I prefer on a hunting rifle, but it was smooth enough to give the impression of a lighter trigger pull.

CMMG chose to give the basic Mk.3 an 18-inch barrel, and I can say it was noticeable when compared to the 16-inch

.308 I have recently tried. Just the extra 2 inches resulted in a much lower noise level and muzzle blast.

Some may disagree with me, but with a .308 carbine I would gladly trade 2 inches of handiness for a much-reduced muzzle blast. It should be noted that once the scope and a full 20-round magazine were added to the rifle the total weight surpassed 12.5 pounds. The rifle is balanced well and it didn't seem to weigh this much, but no one can call the Mk.3 a "mountain rifle."

THE BOTTOM LINE

In the late 1950s, the AR-10 spawned the AR-15. Fifty years later, the popularity of the AR-15 has brought about a resurgence of the more-powerful AR-10. If nothing else, this proves that time and place can even play a major part in rifle design.

CMMG's version of the AR-

10 has the power and size of the original, but also has the refinements of the modern AR-15. If these refinements were combined with CMMG's quality of production back in the 1950s, those military trials may have had a different outcome. **MSR**

THE AUTHOR: Terrill Hoffman, a North Carolina resident, has been writing about firearms for more than three decades.

HUNTING

MSR



Heart of WILDERNESS COUNTRY

➔ THE ADRENALINE RUSH OF HUNTING

I couldn't believe what I was seeing.

I had scanned this distant hillside for three mornings in a row, and each time, not one hair of a mule deer. But on this crisp, gray dawn, I was looking at four good bucks, all in a sparring frenzy, despite it being mid-September.

Of course, they were extremely far away. With the aid of my spotting scope, I could see that two of the bucks had tall, thick and wide headgear ...

You know the feeling. You have been there many times. That's why the following section is devoted to you and your modern sporting rifle.

HUNTING

MSR

GOT GAME?

↓ FOR HUNTING, THE AR-15 IS FAST, ACCURATE & FUNCTIONALLY DEPENDABLE

BY CHUCK TAYLOR



Norm Hanson, owner of Norman Hanson Firearms in Tehachapi, Calif., scored on the afternoon of the first day of the hunt, taking this nice 130-class 8-point buck with a single shot with his precision-configured M4 and DRT ammunition.



In an attempt to remove the erroneous stigma of being an “assault weapon” or “assault rifle,” the National Shooting Sports Foundation coined the term “modern sporting rifle” to describe the AR-15 and M4. Both the traditional AR-15 and M4 are completely suitable for sporting functions, from recreational plinking to competitive shooting to actual hunting.

Configured properly, they’re both capable of target-grade and even precision-grade accuracy, and their excellent balance and quick repeat-shot capacity make them great choices for quickly and cleanly taking any number of animal species.

An AR-15/M4 with a tight upper and lower received fit,

decent trigger and appropriate sighting apparatus is as accurate as a well-made bolt-action hunting rifle. In a precision configuration, it can equal the performance of any precision bolt-action ever made. In short, it can be made to shoot better than even the finest marksman can shoot them. I know because I found out firsthand.

POWERFUL ENOUGH?

While conceding that the AR-15/M4 is capable of excellent accuracy, there are those who say the cartridge for which it’s typically chambered (the .223 REM/5.56x45mm NATO) isn’t

sufficiently powerful to take anything but small game. If FMJ military bullet configurations were all that’s available, I might agree, but the truth is that there is a vast array of bullet weights and configurations available for the .223



WHY THEY ARE GOOD CHOICES

- Capable of target-grade and even precision-grade accuracy
- Excellent balance
- Quick repeat-shot capacity makes them a great choice for quickly and cleanly taking any number of animal species

IN A PRECISION CONFIGURATION, IT CAN EQUAL THE PERFORMANCE OF ANY PRECISION BOLT-ACTION EVER MADE.



Gail Chandler took this gorgeous 150-class buck late-morning on the first day from 175 meters with a single thoracic shot from her standard M4 equipped with a Leupold 2-7x40mm scope and DRT 55-grain Terminal Shock ammo. Hers was the best buck of the hunt, sporting a beautiful 9-point rack and weighing a whopping 271 pounds dressed.

REM, not to mention an ever-burgeoning offering of factory ammunition as well. This changes things dramatically.

Over the years, I've settled on two bullet types that give the .223 REM the greatest versatility. For small game (prairie dogs, rabbits, coyotes, bobcats, foxes and javelina), virtually any 55-grain soft-point is entirely adequate. However, for larger critters such as mountain lion and deer, it lacks penetration. For this reason, it is often prohibited for big game hunting by many states.

To successfully hunt animals, even exceptionally large ones such as elk, the 55-grain Terminal Shock bullet from Dynamic Research Technologies is far and away the best choice. Available as both component bullet and factory ammunition, its revolutionary bullet concept provides excellent accuracy and spectacular terminal ballistics without loss of critical penetration to vital organs. Of lead-free construction, the DRT bullet consists of a compressed powdered copper core, retarding cup and copper gilding jacket. Upon impact and initial penetration, the retarding cup prevents the bullet from prematurely disintegrating, which in turn allows it to reach vital organs. Once suffi-



During recent years, the M4 has become the preferred version of the AR-15 and continues to proliferate. Unfortunately, its semiautomatic-only civilian version has now become the target of unscrupulous political elements seeking to ban it and all similar rifles, claiming that it's "unsuitable for sporting purposes." In truth, such claims are fallacious and totally without basis.



ASSAULT WEAPON DEFINED

The term "assault weapon" is purely political and without any technical basis, which means that it can be defined any way politicians wish.

The term "assault rifle," however, does have a technical basis, as originally created by the Germans during the early stages of World War II. First appearing back in 1942, assault rifle is the English translation of the German term "Sturm Gewehr," meaning "storm gun." There are four specific criteria involved.

The weapon must:

1. Be a carbine
2. Be capable of fully automatic fire
3. Utilize a detachable-box magazine
4. Utilize an intermediate-powered cartridge.

As far as the AR-15 and M4 are concerned, criteria No. 1 and No. 3 are satisfied. Both are carbines and both utilize a detachable-box magazine. However, in their civilian versions, neither is capable of fully automatic fire and neither one utilizes an intermediate-powered cartridge, at least not in the sense the term was intended. A true intermediate-powered cartridge produces lower breech pressures and is rated somewhere between a pistol and true high-powered rifle cartridge.

The .223 REM/5.56x45mm NATO, for which both rifles are typically chambered, produces in excess of 50,000 psi and a muzzle velocity in excess of 2,800 fps.

In contrast, the most well known as-

sault rifle cartridge, the Soviet 7.62x39mm, produces from 2,100–2,400 fps (depending upon its country of manufacture) and a breech pressure of around 43,000 psi. Thus, correctly defined, neither the traditional civilian AR-15 nor M4 meets the criteria.

Although most of the confusion is the result of intentional misrepresentation, non-shooters are lulled into believing the lie because the two rifles superficially resemble the military M16 and M4, which are select-fire. However, a detailed inspection reveals that they use a completely different bolt carrier, lower receiver and trigger group parts, which, from a functional standpoint, makes them no different than any other semiautomatic rifle.



Highly adaptable and capable of exceptional accuracy when properly configured, the AR-15 and M4 are suitable for virtually all sporting endeavors, from hunting to recreational plinking to competitive shooting.

cient penetration to vital organs is achieved, the bullet disintegrates into multiple pieces, causing tremendous organic damage and resulting in systemic shock.

When we add up the AR-15/M4's inherent accuracy, functional reliability, light weight and superior balance, and then include proper bullet selection, we quickly see that the equation is drastically — and favorably — altered. Properly configured and with the right ammunition, either gun is fully capable of excellent performance on a wide variety of animal species.

DEER HUNTING

To graphically prove the point, CTASAA associate instructor

Gail Chandler, professional associates and personal friends Norm Hanson and Steve Browning, and I took our M4s into the field after the largest of North American deer, the Midwestern whitetail.

This particular whitetail subspecies was selected for a number of reasons. First, as mentioned, they're exceptionally large, with virtually any mature buck weighing over 200 pounds. Second, they're exceptionally tough, with a well-deserved reputation for being tough to quickly bring down, even with a perfect hit. Third, being indigenous to the cornbelt, they're exceptionally tasty table fare.

We planned to hunt for three days, but the hunting was so good that Steve scored just before sunrise the first morning. Less than two hours later, Norm was next. Gail took her buck mid-morning. I got my turn just before dark.

It was unbelievable, all four of us were successful the first day, taking excellent 130–150-class bucks weighing from 200–271 pounds at ranges from 60–175 meters and all with a single thoracic shot each with DRT's 55-grain Terminal Shock bullet.

Norm and I used precision-configured M4s, while Gail and Steve's M4s were standard. Norm chose the DRT factory 55-grain load,

while Gail, Steve and I used a custom handload I had worked up especially for the short-barreled M4 that consisted of the DRT 55-grain bullet and 24.5-grains of Hodgdon's BLC-2 (2,600 fps from 16-inch barrel) in military brass.

None of the animals traveled any significant distance after being hit, which is exceptional, as I have hunted this particular animal before and been amazed at their toughness and tenacity. I've seen them hit perfectly with .308s, .30-06s and even .300 WIN MAGs and still run 50 meters before collapsing.

Subsequent examination of the animals showed nearly complete destruction of all

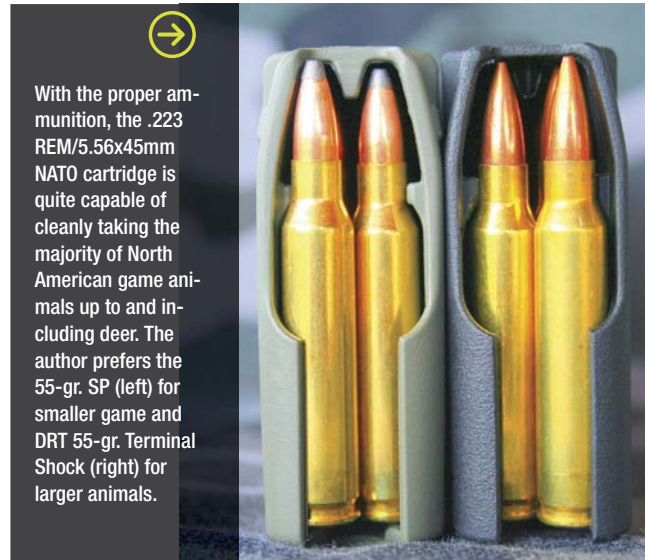
thoracic organs, with substantial gelatinization of surrounding body fluids. This kind of terminal ballistic destruction is more akin to powerful center fire rifle cartridges like the .300 WIN MAG, rather than the .223 REM/5.56x45mm NATO. Of particular interest to me was the fact that other than a single bullet fragment, there was no exit, even with broadside thoracic shots at relatively close range. All energy and resulting organic effect was directed exactly where it belongs, inside the target.

In my particular case, the buck I took proved to be an especially sneaky fellow, appearing and disappearing a number of times in and out of the wood line before I could take him. I even saw him

fight with another buck for the attentions of a nearby rutting doe, but he was always back in the trees where I couldn't get a clear shot at him. He won the bout, driving the other buck away limping and visibly battle-scarred.

The doe finally moved closer to me and the buck circled to intercept her, allowing me an opportunity, albeit left-handed, as he approached. Trotting along briskly, he presented a frontal shot and I took it, dropping him instantly in his tracks.

The final score? Intrepid heroes (and heroine) four, bucks zero. All were taken with a single thoracic each. I've hunted all over the world but seldom have I been on a more pleasant and successful hunt than this one — and



With the proper ammunition, the .223 REM/5.56x45mm NATO cartridge is quite capable of cleanly taking the majority of North American game animals up to and including deer. The author prefers the 55-gr. SP (left) for smaller game and DRT 55-gr. Terminal Shock (right) for larger animals.

with .223s, no less. The icing on the cake occurred when the property owner advised us that we'd set a record for his ranch, no one had ever been so successful on the first day.

OFF BASE

So, let's get back to the anti-gunner's claim that the AR-15/M4 is "not suitable for

sporting purposes."

The heck it isn't!

Like any other sporting rifle, all that's required for excellent results is to set it up correctly and use the right ammunition for the animal species being hunted. It's fast, accurate, functionally dependable and well balanced, thus making it a fine choice for any kind of sporting purpose. With the right ammunition, it can take all but the largest of North American game species.

On the other hand, there's a friend of mine who took a 400-pound black bear and regularly take elk with one, but that's another story. **MSR**



As this five-shot, 100-meter group clearly attests, the AR-15/M4 is capable of equaling the accuracy of any good bolt-action sporting rifle.

THE AUTHOR: Although widely known as one of the world's top professional weapons and tactics instructors, writers and consultants, Chuck Taylor, who has more than 40 years of hunting experience, is also an enthusiastic and successful big-game hunter with worldwide experience. He is a recipient of the Safari Club International Top Ten Award.

HUNTING

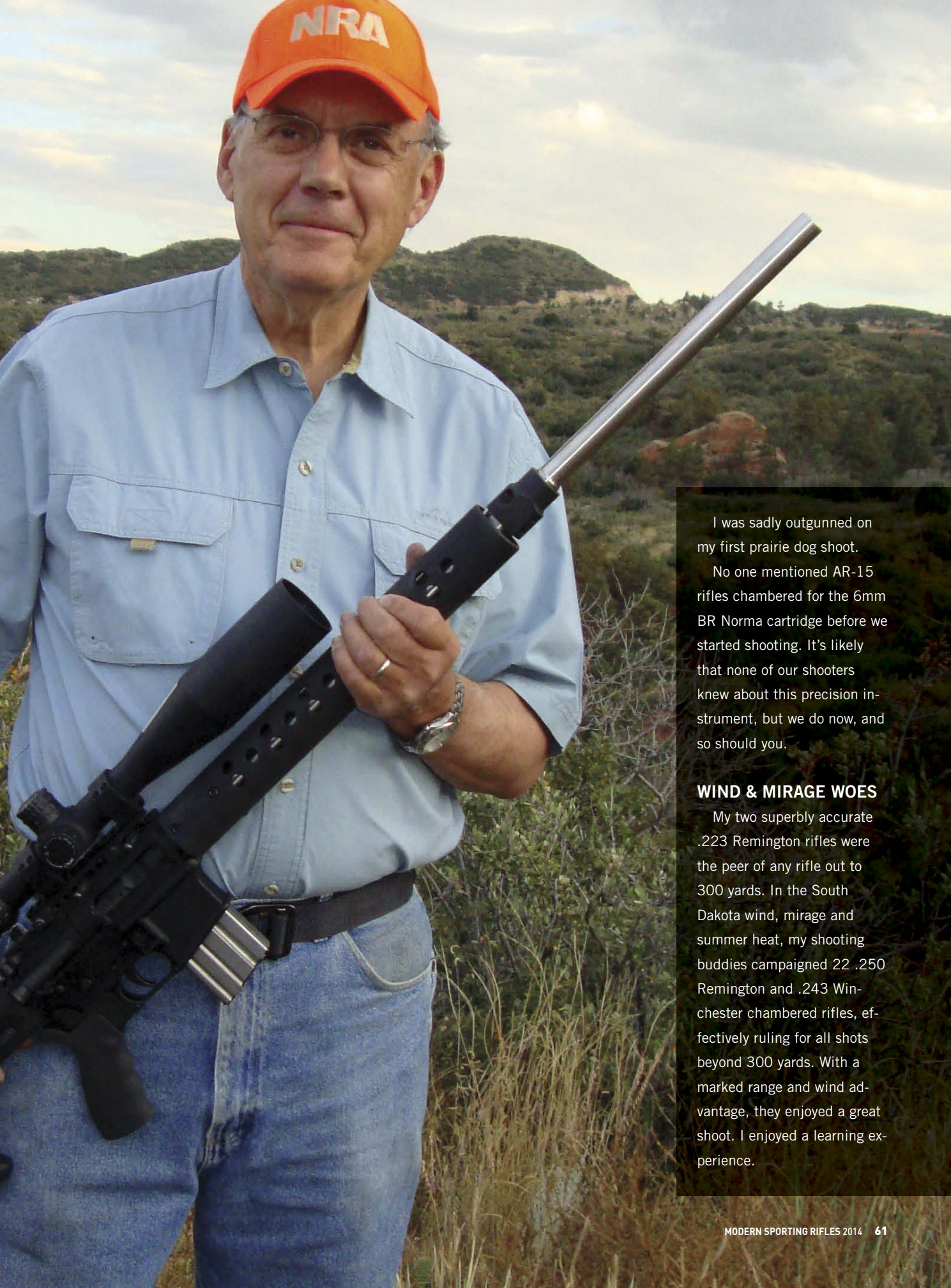
MSR

OUTGUN THEM

↓ THE 6MM BR CREATES ACCURACY, SAFETY & RELIABILITY IN YOUR AR-15

BY COL. BILL BALL, U.S. AIR FORCE (RET.)

With precision-adjustable iron sights and ammunition with 105–107-grain match bullets, this 6mm BR rifle, used in 600- and 1,000-yard matches, is a sub-minute of angle rifle.



I was sadly outgunned on my first prairie dog shoot.

No one mentioned AR-15 rifles chambered for the 6mm BR Norma cartridge before we started shooting. It's likely that none of our shooters knew about this precision instrument, but we do now, and so should you.

WIND & MIRAGE WOES

My two superbly accurate .223 Remington rifles were the peer of any rifle out to 300 yards. In the South Dakota wind, mirage and summer heat, my shooting buddies campaigned 22 .250 Remington and .243 Winchester chambered rifles, effectively ruling for all shots beyond 300 yards. With a marked range and wind advantage, they enjoyed a great shoot. I enjoyed a learning experience.



↑ TOP: High Master shooter Bob McConkey shows how to shoot the AR-15 in 6mm BR Norma in the sitting position used in 200-yard NRA Across-the-Course matches.

The best takeaway was my AR-15 Varminter allowed faster second or third shot corrections when I misjudged wind or distance compared to the manual bolt actions on adjacent shooting tables. In fact, I owned 11 bolt-action dog rifles that hung around the reloading press, clamoring for attention. There was a laser-like .17 Remington, Ruger's .204 in a Czech bolt action, a consistently accurate Marlin/Sako in .222 Remington, a pair of Finnish-built .22 .250s with heavy barrels, three-bolt-action .243 Winchesters and a FN-actioned .250-3000 Savage. Let me also mention one

Lester Bruno 6mm BR bench rest rifle and a Tikka Master Sporter, accurately rebarreled to 6mm BR by Pac-NoR.

Each rifle did something well, but the 6mm BR rifles seemed to do everything better. They had better barrel life than their .243 brethren and the 6mm bullets they sent down range had a better ballistic coefficient than the .223 Remington. Norma factory testing confirmed that 6mm BR rifles enjoy about twice the barrel life of .243 Winchester chambered firearms. Both my rifles were bolt actions, though, so the rapid second and third shots were slower and bolt manipu-

lation made it difficult to reacquire the target.

Clearly, I needed (and wanted) a better-performing rifle and cartridge solution.

AN AR SOLUTION

I needed one that combined the AR-15 self-loading feature with high-velocity, wind-bucking 6mm bullets. Compared to a .223 Remington squirting 55-grain bullets at 3,200 fps, the 6mm BR rifle launched a 75-grain bullet with a better ballistic coefficient at almost the same speed.

About that moment my friend Bob McConkey, who is an NRA high master in high-

power rifle competition, called with great news. The 6mm BR cartridge (officially the 6mm Bench Rest Norma) could be acquired in a match-grade upper that would fit on any correctly dimensioned AR-15 lower.

McConkey wanted one of these uppers to shoot NRA Across-The-Course matches at 200, 300 and 600 yards, as well as NRA Long Range at 1,000 yards. As for me, I wanted to extend my range on prairie dogs, with faster follow-on shots, wind-bucking bullets and reduced effort to reacquire the target. We bought two uppers from BR Armament Technologies in Saluda, Va.,



A TRANSFORMATION OCCURS

The 6mm BR began life as a highly accurate, low-recoil target cartridge. In about 1994, Norma engineers standardized the cartridge by changing base dimensions and neck length on an earlier, small rifle primed cartridge called the 6mm Remington Benchrest.

Some folks think the .6 PPC or the .22 PPC cartridge owns the first-place trophy for the most-accurate cartridge, but beyond 300 yards, those smaller-cased cartridges can't match the 6mm BR's performance, which arises from its larger case capacity.



First-time prairie dog shooter Murphie Robinson scans for more targets.

essentially abandoning bolt-action rifles for modern sporting rifles, which leads me to a brief history lesson.

A NEW FAVORITE

Once the military bolt-action rifle reached its zenith in WWI, it became the firearm of choice for hunting and target shooting for millions of former soldiers, their sons and grandsons. Then AR-15 rifles proliferated in various government uses in the 1960s and following decades. Soon this new rifle overtook manually operated bolt-action rifles as the favorite firearm for target shooting, hunting and self-defense. As a young Air Force officer in a combat unit, I trained with the M16, the military predecessor of the modern sporting rifle.

Today, Eugene Stoner's AR-15 design shapes the foundation for modern sporting rifles. One fundamental reason lies in

the flexibility and adaptability of the upper and lower receiver design. Depressing two pins allows one upper receiver to replace another, offering almost instant changes to caliber and configuration. If you press the pivot pin and rear takedown pins, the lower receiver can be configured with upper receivers ranging from a crossbow to a 50 BMG single-shot rifle. Neither alternative, however, seems to be the best choice for varmint and target shooting.

Happily, for prairie dog shooters and NRA high-power competitors, there are a lot of choices that fall between a crossbow bolt zipping along at about 400 feet per second and 650 grains of 50 caliber bullets at 3,000 fps. For competitive high-power matches and varmint shooting, the 6mm BR Norma cartridge became a heads-up favorite.

BULLET	VARGET	VELOCITY	COAL	USE
107 Sierra MK	29.2-gr	2,800	2.440 in.	Match 600/1,000-yard slow prone, single load
105 Berger VLD	29.6-gr	2,825	2.440 in.	Match 600/1000-yard slow prone, single load
95-gr Sierra MK	30.0-gr	2,900	2.250 in.	Match 300-yard, rapid fire prone, magazine fed
70-gr Sierra MK	31.0-gr	3,100	2.150 in.	Match 200-yard, standing, sitting, magazine fed
87-gr V-Max	30.3-gr	3,000	2.250 in.	Varmint shooting, magazine-fed
75-gr V-Max	31.0-gr	3,100	2.250 in.	Varmint shooting, magazine-fed
65-gr V-Max	32.0-gr	3,200	2.250 in.	Varmint shooting, magazine-fed



Spotter Ed Mann and shooter Murphie Robinson use team work to thin down the prairie dog population in southern Colorado.

The 6mm BR uses a standard .473-inch case head diameter, fires small rifle primers and fits handily into the standard AR-15 magazine well. Easily one of the most-accurate cartridges on the planet, it is a long-time, world-class standard for winning European CISM and ISSF 300-meter match competitions.

Norma and Lapua produce factory ammunition of extremely high quality. Norma's 95-grain FMJ bullet (ballistic coefficient .351) slips down range at 2,789-fps muzzle velocity. It drops just 8.6 inches at 300 yards, given a 200-yard zero. Lapua's published ballistic tables take the 6mm

BR out to 1,000 yards, leaving the muzzle at 2,790 fps and dropping just 215 inches upon arrival, using a 105-grain Scenar projectile.

Recognizing the accuracy potential, American gunsmiths began to shoehorn the 6mm BR case into the AR-15 rifle by lathe-turning each case rim to fit into the AR-15 bolt. The AR-15 bolt for .223 caliber rifles measures .378 inches and the bolt for 7.62x39 cartridges measures .445 inches. Opening either bolt face for the larger .473-inch diameter 6mm BR case removed too much metal for safety from the bolt and barrel extension, so the rim diameter had to be reduced.

A BETTER IDEA

When modern sporting rifles became available in Winchester short-magnum cartridges, BR Armament Technologies gunsmith Eric Bellows grabbed his calipers, measured the bolt and barrel extension dimensions, and placed an order for these larger and stronger parts. Using the beefier bolt and barrel extensions, Bellows modified the bolt carrier and upper receiver before fitting a precisely chambered match grade barrel.

The BR Armament Technologies uppers came with five-round straight line feed magazines, which required a bit of a change for match

shooters used to two-round and eight-round courses of fire. The intersection of the AR-15 design, the newly standardized 6mm Bench Rest Norma cartridge, and the ability to chamber this cartridge without modification created a higher level of performance for target and varmint shooters.

TAKING THE PLUNGE

I then ordered a 6mmBR upper with a 28-inch Krieger stainless steel barrel. A week later, I opened the box, slapped the 6mm BR upper on a lower, and pressed home the rear takedown pin and front pivot pin to complete the rifle. My target-shooting partner chose the same barrel with modifications for the iron sights used by NRA high-power shooters.

A detached retina some years back means I have to shoot with a scope, while the NRA match shooters are required to shoot with iron sights. Consequently, my rifle sports a crisp Geissele match trigger and adjustable Mag-Pul PRS stock, with a Night-force 5x15 scope on top.

McConkey installed ultra-precise Centra rear sights and Riles RnR adjustable front sight system, along with a special John Hollinger butt-stock designed for target shooters who seek almost infinite adjustability in their



Equipped with a 28-inch Krieger match barrel, Nightforce scope, 2-inch ventilated handguard, Geissele trigger and MagPul PRS stock, this modern sporting rifle is ready for long range, precision shooting. The 6mm BR Norma cartridge is one of the most accurate cartridges on the planet.

stocks. His lower holds a Geissele national match trigger, too.

Appropriately configured for long-range match shooting, the 6mm BR upper repeatedly demonstrated winning performance. Long-range shooting requires quality ammunition, an accurate rifle, good reading of wind conditions and the ability to hold a steady position.

COMPETITIVE PERFORMANCE

Heavier 6mm bullets have a higher ballistic coefficient, retaining velocity and resisting wind better than lighter bullets. For 600-yard prone shooting, the target's 10 ring measures 12 inches and the X-ring spans 6 inches. At one 600-yard match, Bob's 6mm BR upper took first place with 200 points, with nine shots in

EACH RIFLE DID SOMETHING WELL, BUT THE 6MM BR RIFLES SEEMED TO DO EVERYTHING BETTER.

the X-ring. At 1,000 yards, his best score totaled 196 with 10 zipping into the X-ring. The 1,000-yard target measures 20 inches across the 10 ring and 10 inches will cover the X-ring. Both scores, by the way, were shot prone, using iron sights.

Shooting prairie dogs with the 6mm BR upper proved equally satisfying.

RELOADING FOR PRAIRIE DOGS

Prairie dog shooting requires an accurate bullet — one that will expand rapidly

— and plenty of them. These bullets weigh less than the long-range target bullets and shed velocity faster due to a lesser ballistic coefficient. Thankfully, top-quality 6mm bullets are widely available in yellow, green and red boxes. I bought Hornady V-Max bullets because they are available, accurate and relatively inexpensive.

Three days of prairie dog shooting might chew up 700 rounds, while one high-power match needs 80 rounds. For prairie dog shooting, reloading becomes essential for these

quantities. For match shooting, reloading gives absolute control over ammunition quality.

The load data (shown in the sidebar) proved accurate, safe and reliable in McConkey's upper and mine, but it might not be safe in other firearms. Reduce your starting load by 10 percent and work up slowly, looking for pressure signs. Use caution and practice sound reloading techniques.

Remember that if you load and test ammunition in the cooler months, you might ex-

... BEYOND 300 YARDS, THOSE SMALLER-CASED CARTRIDGES CAN'T MATCH THE 6MM BR'S PERFORMANCE ...



LEFT TO RIGHT: The author uses a fixed station Dillon 450 reloading press to craft accurate, reliable 6mm BR Norma cartridges. Each powder charge is individually weighed on a RCBS Chagemaster dispenser and scale. The handiest little gadget is the Lyman powder funnel. • Measuring case neck runout with the precision Sinclair concentricity gauge is a straightforward quality control check. Crafted with the reloading techniques in this article, this round measured less than .001 inch runout, ample for shooting prairie dogs. • For long case life with Lapua 6mm BR brass, shoulder setback after full-length resizing should be about .002–.003 inches, as measured with a Hornady Lock-N-Load cartridge headspace gauge.

perience excessive pressure when shooting during the hotter months. A Tucson, Ariz., shooting friend keeps his ammo in a cooler when shooting in warmer temperatures.

COMPONENT CHOICES AND TWEAKS

All loads use Remington 7.5 small rifle bench rest primers in Lapua brass. For these reloads, the Remington 7.5 primer seems more puncture proof than other primers.

Lapua brass offers great value for money. With the 6mm BR cartridge in an AR-15 rifle, no need exists to turn necks like the hard-core benchrest community does. Bellows cuts his match rifle

chambers for a no-turn neck, so Lapua brass works fine just as it comes out of the factory box.

Using a few reloading tweaks, brass life is remarkable. My NRA match-shooting friend reloaded his Lapua cases 13 times, retaining tight primer pockets and without splitting the necks. We found a bushing-type full-length resizing die, without an expander ball works best. Bushing sizes range from .263–.265 inches, and we strive for .001 inches case neck tension for the slow prone loads. For magazine fed loads, a case neck tension of .002–.003 inches holds bullets in place as the rifle cy-

cles cartridges out of the magazine.

The absolute key to long brass life lies in setting the resizing die to set the shoulder back between .002–.003 inches, neither more nor less. Hornady's Lock-N-Load headspace gauge tool, used with a good digital or dial caliper, provides a precise way to establish the case shoulder setback.

Last week, I campaigned the 6mm BR upper on public land prairie dogs in southeastern Colorado. I had trouble recovering my rifle from a first-time shooter who scored on her first prairie dog.

Before I could reclaim the rifle, she took out many grass

guzzling critters, saving about a bale of grass hay that would otherwise be consumed by each one. My best shot was laser measured at 440 yards in moderate winds, an even quarter-mile distance on a target that measures about 4 inches x 13 inches.

I don't feel outgunned anymore. Other shooters get that honor. **MSR**

THE AUTHOR: Colonel Bill Ball is a life-long hunter who has been on several African safaris. A journalist by training, he served in the U.S. Air Force, commanding communications units in Alaska, England and Germany. He served as the architect for the United States' ballistic missile warning system. He lives in the Rocky Mountains with his wife and an extended family of prairie dog rifles.

RELOADING

MSR



A few of the Arizona Junior Rifle Team AR15 match rifles used in competition. Photo taken at Camp Perry, Ohio, home of the National Trophy Rifle Matches.

Arizona's Junior Rifle Team is comprised of tenacious rifle competitors.

They have won 14 National Championships and need no introduction wherever they compete. Many of the team members have earned the coveted Distinguished Riflemen Badge, the highest award that can be earned in competitive rifle shooting. That takes a lot of practice and reloaded match-grade ammo.

"We reload 600 rounds of match ammo in a little over two hours," said Tom Kirby, senior coach and Junior High Power Division Director for the Arizona State Rifle and Pistol Association (ASRPA). "They're super-fast match loads with the 77-gr. Sierra Match King bullet, they're not wimpy loads. People

doubt me when I say this, but we can also resize about 1,000 cases an hour. We've been doing it for more than 10 years with consistent quality, minimal problems and results that prove that our system works."

So how does one of the top junior rifle teams in the country keep up with the necessity of loading 40,000 rounds of match ammunition every year?

Easy.

They could either purchase the match ammo at \$1 a round, which would have required a victory in the lottery to cover that cost, or they could reload.

RELOAD LIKE A CHAMPION

To make that happen, the team uses Dillon reloaders.

"They have never failed to keep us supplied in match ammo," said Kirby. "I just needed a few helpers to seat primers, drop powder and seat bullets, while a second pair could resize several thousand cases. Although our system may be considered unorthodox by

40,000 ROUNDS



TO CUT COSTS, THE ARIZONA JUNIOR RIFLE TEAM RELOADS ENORMOUS AMOUNTS OF AMMO — AND YOU CAN, TOO

BY ROBERT DIAMOND / PHOTOS BY TOM KIRBY



The Arizona Junior High Power Rifle Team at the 2014 National Matches Trophy Rifles Matches in Camp Perry, Ohio.

some, when you have to produce 40,000 rounds of match ammo, you don't have many options."

The team's single-stage reloaders were retired years ago and it invested in two Dillon 550s and a Dillon 650, according to Kirby.

Ammunition used in high-power rifle competition must be able to hold CD-sized groups at 200, 300 and 600 yards. Due to the longer distances required for shooting high-power rifles, there's no margin of error in reloading. When you're shooting 600 yards in a 6-mph cross wind, your ammo has to handle 3.5 minutes of broadside force or more than about 20 inches of drift.

"For that reason, we don't cut corners on reloading," said

Kirby. "Everything has been learned through years of experience and in shooting several hundred thousand rounds of match ammunition at bull's-eye targets. In fact, the team's Dillon reloaders just passed the 300,000-round count mark and were serviced for the first time, which was covered by warranty."

INVESTMENT IN PRODUCTIVITY

To do this, the team uses two Dillon RL550B reloaders and a Dillon XL650 reloader that is equipped with the Dillon Rapid Trim 1200B case trimmer and the 650 small rifle case feeder.

One of the 550s is dedicated to seating primers and dropping powder. The other 550 is dedicated to seating bullets. The

system requires two team members working in tandem to produce 400 rounds of match in about two hours. A third person increases production by an additional 300 rounds in three hours, so it is possible to load 700 rounds, or more, in that time span. Add a fourth helper and they can produce more than a thousand rounds of match ammunition in the same amount of time.

Because of the complexity of reloading volumes of small rifle cartridges (compared to larger .30-cal rifle cases and using extruded-stick powder that is more difficult to handle than ball powder), Kirby said he found that two 550s can produce more match ammunition than a 650 that handles all of the reloading steps.

The Sierra Match King 77-grain and 80-grain bullets, as well as other BTHP match bullets, will stay in the center of the bull's-eye (depending on the competency of the shooter) without deburring and chamfering the case necks.

"It makes no notable difference in muzzle velocity when we chrono the loads," Kirby said. "The Dillon trimmer makes such a clean cut that we eliminate hours of time by not duplicating effort. Team members still do a light case neck clean up on the ammo that we shoot in important matches. We have fired over 300,000 rounds and the bul-

lets are still going into the 10-X ring."

CLEAN BRASS IN LESS TIME

Before resizing brass, the team members clean about 350–400 fired .223 cases at a time in a large Dillon CV2001 case cleaner. It is possible to add more cases but the vibrating brass makes more noise. The first cleaning, which is about one hour, removes most of the powder residue and debris. Kirby recommends filling the tumbler with corncob media, not walnut shell media, which makes a lot of dust. Add about five tablespoons of Dillon Rapid Polish 290 to the corn media and let the tumbler run for five minutes before loading the brass.

After an hour, separate the brass and corncob media with the Dillon CM-2000 case-media separator and store the brass in 5-gallon buckets. Find a shallow box and lightly spray about 125 cases at a time with case lube.

Resize the cases as soon as possible after spraying because the longer they sit, the stickier the lube will become, which will slow down production. Next, grab a handful of lubed brass, with the necks pointing up, and lightly mist One-Shot Case Lube aerosol into the case necks. This is a critical key step that will allow the brass to glide more smoothly in a full-length carbide-resizing die. This will



A third person is added to the production, allowing Morgan to move over the Dillon 650 to resize cases, while Clint L. takes over seating primers and dropping powder on the 550. Kade (at left) is seating bullets on a second 550.

increase the volume of cases to the capacity that the 650 can easily handle.

Pull a few cases aside and check for head space. Two people can resize nearly 1,000 cases an hour. One person can operate the 650 and the other can lube the brass and dump it into the case feeder. After resizing 250–300 pieces of brass, they switch positions. The team resizes about 5,000 pieces in one session.

After the brass has been resized, it needs to be cleaned again in the Dillon case cleaner to remove the case lube. Add the same amount of Rapid Polish and allow the media cleaner to run for

about two hours or until the brass is bright and shiny. The corn media should last through about 2,000 pieces of brass before it needs to be replaced.

Store the resized brass in a 5-gallon bucket. Make sure to track the number of resizings so it doesn't get mixed in with brass that has different resizing pedigrees.

Stripe the brass with different color Sharpie markers to identify it on the firing line and to track the number of firings it has been through. .223 brass can be overstressed in the expansion, contraction and trimming cycles when it's fired in different ARs with varying throat

erosion. This can cause the wall to weaken near the case head, which will lead to case separations.

After charging the cases with powder, visually inspect them with a high-intensity LED flashlight while they are still in trays. The light from the LED is bright enough that it's easy to immediately detect over- and under-charged cases. A conventional flashlight will not work.

The Dillon 550 will hold stick powder to 2/10s of a grain. Once the powder bar level is set, visually inspect the loads and keep them within the 2/10s margin. This amount of variance will not keep your shots out of the 10-X ring.

TEAMWORK

That's how the team gets it done in competition and re-loading. As noted, Arizona's Junior Rifle Team is comprised of tenacious rifle competitors. **MSR**

THE AUTHOR: Robert Diamond is a freelance writer based in Arizona.



MORE ON DILLON

WEB

DillonPrecision.com

PHONE

(800) 762-3845

FIELD TESTED

MSR



Friends don't let friends sit to the right of the PTR-91 at the range. Ejection scatters fired cases around and you will lose them if you don't use a brass catcher of some sort.

If you think Vladimir Putin and his band of Russian thugs are creating an uproar in the world today with their incursion into Ukraine, just take a long look back to the Cold War era.

Back then Russia and its Warsaw Pact allies placed the entire world on full-time hair-trigger alert, with a divided Germany as ground zero; if war was to break out, it would likely happen on German soil. At any minute the whole Russian army could come storming through the Fulda Gap.

West Germany geared up for that looming invasion by adopting a new magazine-fed main battle rifle chambered in 7.62x51 NATO (.308 Winchester in civilian form). While the U.S. Army transitioned from the WWII M1 Garand to the mildly reworked M14, West Germany crafted the incredibly cool Heckler & Koch G3 selective-fire rifle, a space-age-style innovation that instantly made everything else look old-school. With its unique design and deadly serious looks, the G3 quickly gained fame, appearing in news coverage everywhere. Eventually, more than 70

MADE IN AMERICA: THE PTR-91



A NEW SOURCE FOR A COLD WAR ICON
STORY AND PHOTOS BY KM LEE



TOP: The low-profile scope mount from MFI clamps on quickly and easily. Four screws actuate beefy hooks that firmly grasp small ledges built into the top of the receiver. BOTTOM: The compact Leupold VX-1 2-7 easily clears the charging handle up front. After the last round in a magazine is fired, the charging handle does not lock back automatically.

COMPARATIVE SPECS

PTR G.I. PTR91.com

CALIBER: .308 Winchester or 7.62 NATO

ACTION: Delayed blowback roller-lock system

WEIGHT: 9.5 pounds

OVERALL LENGTH: 40.4 inches

BARREL LENGTH: 18 inches

RATE OF FIRE: Semiautomatic only

MUZZLE VELOCITY: 2,625 ft./sec.

FEED SYSTEM: 20-round detachable box magazine

REAR SIGHT: Rotary diopter

FRONT SIGHT: Hooded post

H&K G3 HK-USA.com

CALIBER: 7.62 NATO

ACTION: Delayed blowback roller-lock system

WEIGHT: 9.7 pounds

OVERALL LENGTH: 40.35 inches

BARREL LENGTH: 17.7 inches

RATE OF FIRE: 500–600 rds./min.

MUZZLE VELOCITY: 2,625 ft./sec.

FEED SYSTEM: 20-round detachable box magazine

REAR SIGHT: Rotary diopter

FRONT SIGHT: Hooded post

countries adopted it as their main battle rifle.

A semiautomatic-only sporting version, known as the HK91, soon arrived in the United States. Up to 1989, fewer than 49,000 HK91s were imported into the country, a relatively small number. Today one county in Texas could probably absorb half that allotment, especially since MSRP for an HK91 in 1978 was \$339, on par with the cost of many conventional bolt-action hunting rifles of the time. That was a screaming deal compared to the \$2,000 price of its main rival

back then, the Belgian-made FN-FAL.

Regrettably, in 1989 a federal ban stopped importation of "non-sporting" rifles and following the laws of supply and demand, the value of the HK91 skyrocketed. As of this writing, if you're hoping to purchase an early-era German HK91 you'd better plan on spending \$3,000 or more, if you can find one.

THE TAP OPENS ONCE AGAIN

That kind of pricing is far too rich for most wallets. So in 2002, JLD Enterprises

began manufacturing ban-compliant HK91 "clone" rifles: the PTR-91. For all practical and functional purposes, the PTR-91 was a revival of the HK91 that American gun enthusiasts could freely purchase once more.

Today, the company has geared up as PTR Industries and offers more than 25 variations on the basic HK91 scheme. Thanks to the modular design originally built into the HK91, the PTR-91 can be easily modified via alternate furniture, barrels, sighting options, and more. I selected

the basic PTR G.I. (MSRP \$1,049) to test and came away quite impressed.

REVOLUTIONARY IN DESIGN

Like the G3 and HK91, the PTR-91 incorporates design features that were revolutionary upon its introduction: a roller-locked, delayed-blowback operating system, plus a stamped-steel receiver rather than a gas-operated system, and the machined-steel or forged aluminum construction found in its contemporaries, the M14, FN FAL and AR-10.

The PTR G.I. model is at-



At the range, the PTR-91 handled well and its recoil characteristics were typical for a rifle chambered in .308/7.62 NATO. It was picky about its load preferences, however.

tractive in a purposeful way, adhering to the original H&K style. It features a parkerized finish, OD green handguard and polymer stock, a black polymer lower grip assembly, and a flash hider topping off its 18-inch, 1-in-10 twist match-grade tapered barrel. Like the HK91, the chamber of the PTR barrel features longitudinal fluting that helps promote consistent case extraction upon firing. Total length is 40.5 inches and the weight is 9.5 pounds, yet the even weight distribution lets it feel lively between the hands.

MULTIPLE SIGHTING OPTIONS

The rear sight assembly also follows H&K design; an

easily grasped rotating drum with 100-, 200-, 300- and 400-meter settings. The 100-meter setting features an open V-notch for quick acquisition and peep apertures aid more accurate aiming at the other, longer-range settings. Rugged and serviceable, this sighting setup works well if you have young eyes and you're shooting at large targets (think deer-sized quarry in heavily wooded terrain). However, these excellent iron sights would not allow a full picture of the rifle's accuracy potential and I also wanted to add more versatility, so decided to mount optics.

The original G3 rifle could be scoped using an H&K-made quick-detach claw mount that

firmly grasps small ledges built into the top portion of the receiver. For years these mounts were readily available as surplus, but now the supply is drying up and prices have been steadily climbing. Made to sit high to allow the use of the iron sights, this claw mount requires installation of a raised cheek piece for a proper stock weld and therefore becomes a bit ungainly.

Not being so concerned about that iron-sight necessity, I instead opted for a U.S.-made clamp-on low-profile scope mount from MFI via HKParts.net that works well with the issue stock. This mount fastens in mere minutes, has proven to hold tight and can be easily removed if

so desired.

Since I envisioned the final product to be a working ranch rifle, I selected a compact and lightweight Leupold VX-1 2-7 x 33mm variable scope. At its lowest setting this works great for varmint control on running jackrabbits and coyotes, while the upper range is fine for hunting deer and wild boar, plus range testing. This scope is short enough to easily clear the charging handle up front and the ocular bell is small enough in diameter to just clear the V-notch in the rear sight turret when it's set at the 100-meter position. With larger scopes you might encounter clearance problems that would require a riser block for the scope.



The ocular bell of the Leupold VX-1 2-7 variable scope is small enough in diameter to just clear the V-notch in the rear sight turret when it's set at the 100-meter position.

BASIC OPERATION

Anyone used to modern sporting rifles will find operation of the PTR G.I. to be simple and straightforward. First, retract the cocking lever on the upper left side above the barrel and lock it back by manually rotating it into the small recess provided. Insert a loaded magazine, slap the charging handle down to release it from the locked position, and you're charged, chambered and ready to go. Note that there is no automatic, last-shot hold-open function for the bolt. That might be an issue some day in the heat of battle, so you may consider counting shots and practicing tactical re-

loads. Or not. Look at it another way; if you can't nick a coyote within 20 rounds, you gotta figure he simply deserves to live another day.

HOW MUCH FOR THOSE 20-ROUND MAGAZINES?

About those magazines, here's happy news. Whereas 20-round mags for an AR-10 or an M1A can run \$25-40 or more each, a huge supply of H&K-made aluminum mags flooded the market for years. Remember all that Cold War drama? West Germany wasn't about to run out of rifle magazines if the shooting started in earnest. As a result, these genuine H&K items were long

available for about \$1 each.

What? You didn't stock up back then, hoping for the day you would own an HK91? Well, nowadays, that price has gone up; tripled in fact. Indeed, you can still find surplus H&K mags for \$3 or so from places like Midway USA, very serviceable and perhaps even in near-new condition.

At the range, we put the PTR G.I. through its paces and had a few surprises. Shooting off a sandbagged rest, the scoped PTR G.I. fits well, although some shooters thought a bit more length of pull would feel more comfortable. This can be remedied the quick way with a slip-on recoil pad or with the purchase of an extended-length buttstock. The long, single-stage trigger pull evidenced some creep and grittiness, and was a tad heavy

COLD WAR WARRIORS

During the Cold War era, a variety of selective-fire 7.62 NATO rifles were developed and made available to North Atlantic Treaty Organization (NATO) allies and other countries all around the world. Here are the top-three battle rifles from that era:

RIFLE	COUNTRY OF ORIGIN	MANUFACTURER	USED BY
FN FAL	Belgium	Fabrique Nationale	90+ countries
H&K G3	W. Germany	Heckler & Koch + others	70+ countries
M14	USA	Springfield Armory + others	20+ countries

THE SUGGESTED RETAIL PRICE FOR AN HK91 IN 1978 WAS \$339, ON PAR WITH THE COST OF MANY CONVENTIONAL BOLT-ACTION HUNTING RIFLES.

COMPARATIVE WEIGHT AND BALLISTICS

Today, NATO countries, and most others who formerly used main battle rifles chambered in 7.62 NATO, have transitioned to rifles chambered in 5.56x45 NATO. The main considerations for the change away from 7.62 NATO included heftier recoil and heavier ammunition weight that limited high rates of fire and individual load-out for riflemen in combat. Troops were able to carry more than twice as much 5.56 ammunition as 7.62 for the same weight, which allowed them an advantage in firepower.

CARTRIDGE	CARTRIDGE WEIGHT	WT. OF LOADED 20-RD. MAG.	MAX 22-LB. AMMO LOAD-OUT
7.62 NATO	393 grains	1.5 lbs.	14 mags/21 lbs./280 rds.
5.56 NATO	183 grains	0.7 lbs.	33 mags/21.8 lbs./660 rds.

The 7.62 NATO round, however, can deliver more energy on target than the lighter 5.56 NATO round. This makes the 7.62 much more effective than the 5.56 at long ranges, and it has found much popularity and success as a sniping round in present-day use.

CARTRIDGE	BULLET WEIGHT	VELOCITY	ENERGY
7.62 NATO	147 grains	2,600-2,750 ft./s.	2,250–2,415 ft./lbs.
5.56 NATO	62 grains	3,100 ft./s.	1,325 ft./lbs.

at 8.5 pounds. It's nothing wonderful but certainly quite serviceable for a military-style trigger.

Ejection of fired cases is violent; the PTR flings brass way to heck and gone, forward and right in no discernable pattern. Reloaders be forewarned: You will lose brass at the range if you don't use a brass catcher of some sort; a simple cardboard box set to the right side of the ejection port will suffice.

Out in the field? Best wishes in finding your brass. As with the HK91, the chamber flutings leave scorch marks on the cases that are very unsightly but do not materially affect reloads. Al-

though some HK/PTR owners have complained about forceful ejection that dings brass so badly a port buffer is required, I did not encounter that issue with my rifle.

ACCURACY RESULTS

The HK91 and PTR-91 have built a strong reputation for excellent accuracy, but that's not what we found, at least initially. Affordable Federal American Eagle 150-grain FMJ-BT loads produced five-shot groups averaging 4.75 inches between centers, while bargain-priced Prvi Partizan 145-grain FMJ fared worse, showing 6-inch groups. Not good.

Federal 150-grain soft



HKParts.net is the official distributor of PTR parts, including the 10-round mag (\$49.95) on the right. Fortunately, many sources offer surplus original H&K 20-round mags for \$3 or so.



Equipped with a versatile 2-7 scope that can be quickly removed, plus excellent and durable iron sights at the ready, the PTR-91 offers the flexibility to fill many jobs.

points sliced that down to around 2.25 inches, with one group coming in right at 2 inches. Much better. Winchester Match 168-grain loads with the Matchking HPBT averaged around 2.13 inches but we just couldn't break through that 2-inch barrier as hoped.

So we turned to the loading bench to try some loads. Varget, 4320, 4064 and Winchester 748 powders have all yielded proven results for many .308 shooters, but multiple loads with these powders proved frustrating; Varget and

the Sierra 150 HPBT went just under 3 inches but no better. Due to the PTR's violent autoloading process, a strong bullet crimp was required for all loads.

Then a jug of long-discontinued bulk Data Powder 2200 from Accurate beckoned. Designed primarily for use in 5.56 NATO/.223 Remington, the label listed load data for .308 Winchester. With nothing to lose, we tried some test rounds with 150-grain bullets and struck gold — average groups over 2 inches with bulk FMJs, and

groups well under 2 inches for five shots with Sierra HPBTs, with one bragging group measuring 1.38 inches. Success!

With that, this PTR G.I. has found a home. A rifle must show the appropriate level of accuracy if it's going to stick around, and now it does. This famous Cold War design always stood tall, but three grand to enjoy that bit of nostalgia was just too steep.

For a street price under \$1,000, PTR offers not only the G.I. but also a number of variations on the HK91

theme. Adding those surplus mags at ridiculously low prices sealed the deal. It's a tough, durable, accurate semiautomatic that's now affordable, too. It rides around our property in the truck and handles just about every need. Well, maybe not ground squirrel eradication, at least until I check out some light-bullet loads. **MSR**

THE AUTHOR: KM Lee is a lifelong shooter. For more than three decades, he has been a participant in all aspects of the shooting sports, including match competition, hunting and reloading.

COMPETITION

MSR



ADRENALINE RUSH



THE THRILL & CHALLENGE OF 3-GUN COMPETITION

It's challenging, intense and action-packed.

Whether you're shooting short or long, the sport tests your skills with different firearms in different environments, such as combat or self-defense.

Others are competing, but your opponent is really yourself. Each and every time you put on the gear, you strive to improve and score a little bit better than the last time out.

It's 3-Gun competition. **MSR**



PHOTO COURTESY OF FNH

COMPETITION

MSR

3-GUN NATION



STEP-BY-STEP GUIDE TO PREPARE FOR COMPETITION

STORY AND PHOTOS BY EVA SUBIDO



Are you looking for a challenging and exciting way to test your skills? If so, 3-Gun sport competition may be just what you need.

The sport, which usually attracts both the novice with limited knowledge of firearms and the more-experienced competitive handgunner, is growing fast and there is interest from shooters of various disciplines. Following is what you need to know if you'd like to give it a try.



The rifle is braced with point of contact at the fore end and barricade. It features a low-mounted Bushnell scope on a POF rifle.

RIFLE TYPES

Many types of rifles are acceptable for most 3-Gun competition, including the AR-15, M1A, AR-10, FN-FAL, Ruger Mini-14, AK-47, M1 or any other safe centerfire rifle with a minimum .223 caliber. Having said that, the semiautomatic ArmaLite-type rifle, commonly referred to as an AR, is the most-common rifle platform seen. Keep in mind that most local matches will allow many variants of the modern sporting rifle, but the larger sponsored matches may be restricted to specific rifle platforms, such as the AR.

The market offers many AR brands and features for off-the-shelf rifles. In addition, a near-infinite line of aftermarket parts and accessories is available if you want to tailor the rifle to your competition needs. The vast number of choices can complicate your decision-making. However, by starting with the advice outlined here, you can select the rifle best tailored to your needs without being a professional shooter, gunsmith or ballistics expert.

BASIC TRAINING

The first step is to choose which division you want to compete in. As a guideline, go to the United States Practical Shooting Association to view 3-Gun divisions and equipment rules. Research the rules regarding your rifle and its equipment. This is an important step, as it can narrow down your choices and, really, that's a blessing. Just don't buy a bunch of gear without doing this first.

Before you buy your rifle, find out what others are using. That will allow you to find out what equipment you should buy, as well as how much versatility your rifle will have, and that will make your life easier. Not all of the groups that organize 3-Gun competitions have the same equipment rules, but they will have similar guidelines.

Once you've determined your division and what your equipment guidelines are, it's time to purchase a rifle. The key characteristic is reliability. When selecting your 3-Gun rifle, consider what the division choices are for cal-



ENHANCE YOUR GAME

Basic rifle courses and competition courses are readily available. You'll meet people with different rifles and accessories, and you may be able to shoot a different rifle provided by the training host. This kind of learning is great because you physically participate, ask questions and possibly try new equipment.

iber. You may want to choose ammunition that is more affordable and available or which spent cartridge cases are easier to reload.

You can choose between a fixed (non-adjustable) stock or a collapsible stock that easily adjusts and conforms to your stature. Collapsible stocks may be solid or skeletonized. Choose one that allows you to

... THE SEMIAUTOMATIC ARMALITE-TYPE RIFLE, COMMONLY REFERRED TO AS AN AR, IS THE MOST-COMMON RIFLE PLATFORM SEEN [IN COMPETITION].

obtain a good cheek weld with appropriate eye relief for your optics. If you are sharing a rifle with another shooter, an adjustable stock allows both shooters to adjust the length of pull and scope eye relief to suit your personal needs.

Lanny and Tracy Barnes, twin sisters and U.S. Olympic biathletes, share a 3-Gun rifle.

“We picked Rock River [Arms] for our first 3-Gun rifle because we had shot them before and found them very accurate,” Lanny said. “They are a bit on the heavy side, but Tracy and I prefer heavy guns for competition. Not knowing much about 3-Gun when we started, we picked something easy to work with. It came with an ATI [Advanced Technology International] adjustable stock, which allowed us to fit the gun more specifically to us and that was a big draw.”

BARREL LENGTH

Choose a barrel length appropriate for the course of fire, considering your physique. A longer barrel allows more real estate to attach accessories with the proper fore end or flattop rails. However, your arm length and chest development might demand you choose a shorter barrel if the course of fire requires a sling or if weight is going to be an issue



while shooting offhand or moving.

SIGHTING EQUIPMENT

Your sights need to be versatile enough for both near and distant targets, and you have several options: traditional riflescopes, red-dot or green-reflex sights, and iron sights.

You will need to obtain some sort of sight equipment because most off-the-shelf rifles do not come with a scope or iron sights. Basic rifles may offer a standard front-sight post.

Look for a scope that will provide you with the sight picture for both close and distant targets. Check specifically for a true one-power optic at the low end, up to the highest magnification you can afford.

Find out what the average target distances are to deter-

mine what sighting equipment you need. Shooting facilities may have limited range to the farthest targets. If the limit is 200 yards, you can start with a scope or iron sights sufficient for that distance, but you'll also need to be able to engage targets as close as 5 feet.

Other ranges may offer shooting as far as 600 yards. Larger sponsored and national matches may post their courses of fire prior to the event and you will be able to determine the farthest sight settings you will need.

You have an option to add an alternate set of sights to quickly acquire close targets without disturbing existing longer distance zero.

As you learn and grow in the sport, you may have more to upgrade than just your rifle.





The fore end on this custom barrel is small in diameter and free of attachments. It allows the rifle to fit into certain ports for point of contact and allows the shooter to move his/her hand forward for more transition control.

↓ VITAL RESOURCES

1 Join a 3-Gun Forum

Champion 3-Gun competitor Brian Enos has a robust website with a community of competitors. You will be able to ask questions or research threads that pertain to your subject matter of interest.

The classifieds section of the forum is one of the best resources to find equipment from other competitors.

Web: BrianEnos.com

2 USPSA

The United States Practical Shooting Association has both public and member sites with access to match rules and articles. Members can also access a classifieds section.

Web: USPSA.org

3 National 3-Gun Association

The association promotes a series of competitions for men and women that culminates with a top winner after the series finale. Its website has a great digital magazine with lots of information for novice and advanced shooters.

Go to local matches, regional and national matches to observe and speak with shooters and vendors. Mingle with your local community of 3-Gun shooters during your monthly matches.

Web: 3GunNation.com

4 Rio Practical

This is one of the most comprehensive sites for multi-gun competition, and it comes from the Rio Salado Sportsman's Club, Practical Pistol Division in Mesa, Ariz.

Sponsored shooters' websites list their match equipment because it gives exposure to the sponsors' brand-name equipment. These competitors are generally at the top of the game so you will be able to see what successful professional shooters are using.

Web: RioPractical.com

Stay immersed in the shooting sport by participating as a spectator and/or shooter. Keep asking those questions. Some of our best resources are right in front of us.

MAGAZINE CHOICES

Magazines are available with various capacities and configurations, and the courses of fire you plan to shoot will affect which ones you choose. For example, if you have a stage that requires you to shoot prone, you might have problems with a longer magazine or you might be able to use the long magazine as a monopod.

Become familiar with the various stages of your 3-Gun match so you know what shooting positions are required, as well as how much ammunition you will need. Your course of fire might involve shooting on or around stationary objects such as walls, barricades, tables and posts. Select a shape that won't hinder, find one that helps.

Rick Punu, an avid competitor and local match director from Lake Havasu City, Ariz., uses a number of magazines.

"I have tons of magazines with different setups," he said. "I have two magazines attached side-by-side, drums, and various lengths and capacities. You never know when you can take advantage of two points of



M1 in .30 caliber is an example of an acceptable rifle in local matches for 3-Gun. The sight is a red-dot reflex site.



contact on a stage and how much ammo you'll need."

TRIGGER BASICS

You may opt to keep the standard trigger in your newly purchased rifle or change it to a single- or two-stage trigger. Match-grade triggers are available and everyone has an opinion about them as well. Find out what is standard in your rifle, try others' triggers and make the upgrade if you can afford it.

Your trigger is one key component that will help you get

the best performance and accuracy from your rifle. However, it does not replace practice and experience. I have seen shooters with standard triggers beat their fellow competitors with the finest trigger jobs.

FORE ENDS & ACCESSORIES

Fore end types and accessories are subject to your barrel length and bucket list. However, keep in mind that you will be using the fore end to stabilize the rifle in some stages. If there are attach-



... SHOOT OFTEN AND ENJOY WHAT THE SPORT BRINGS TO YOUR SHOOTING EXPERIENCES.



Offhand shooting of a .308 DPMS 3-Gun rifle with a Bushnell scope. The .308 is a caliber that can be used in many divisions and also as a division all its own.

ments on certain areas or if the fore end is too wide, it might interfere with obtaining a steady rest against a wall or post. Sling attachments are something you can add and easily move to various points of the fore end. Additionally, you can attach alternate sights, light and laser systems for night shooting.

BUYING SECOND HAND

It's not unusual to buy a previously owned rifle and acces-

sories from someone who is up-grading. When buying from someone reputable or a friend, they can teach you how to operate the equipment, educate you on what type of ammunition to use, and when and how to do maintenance. You may get a bonus if they've added accessories and include them in the sale.

EQUIPMENT TEST

The bottom line is your equipment must be reliable.

It has to run 100 percent. Try out your match-ready rifle and correct any issues. There is no excuse to own a rifle that does not run safely and operate flawlessly.

You will have to sight in your rifle and practice until you are fully comfortable with it. This is the time to check for equipment flaws and improve your accuracy. Know where the rifle shoots at various distances and the hold points for each. Finally, shoot

as many local matches as you can for competition experience with different shooting positions and target distances.

PREPARE FOR EACH STAGE

Courses of fire for a match are referred to as stages and are numbered. Each stage will have a written stage description, a required number of targets, and a ratio of pistol, rifle and/or shotgun rounds.



pistol ammunition has not been in abundant supply for various reasons. Stage designs have been adapted to this market trend. Also, specific types of ammunition are not allowed such as armor-piercing, tracers or incendiary ammunition.

To accommodate ammunition shortages, stages have been designed to shoot as two-gun stages combined with stages of various target ratios in shotgun/handgun/rifle.

ENJOY THE RIDE

Your rifle and its equipment must be safe, reliable and meet the demands of the courses of fire. These are the most-important characteristics.

Once you secure these, practice, shoot often and enjoy what the sport brings to your shooting experiences. The multi-gun sport is constantly evolving and new products are always being introduced.

In time, a metamorphosis will occur that will ensure your confidence not only in rifle shooting but your product knowledge as well. **MSR**

THE AUTHOR: Eva Subido is a firearms instructor and recreational shooter. Her core value as an instructor and NRA training counselor is to be a steward of firearms safety. She is active in the United States Practical Shooting Association, as well as other shooting sports so that she may empower other women to participate and gain confidence in their shooting skills. She has a degree in journalism and is a member of the Women's Outdoor Media Association.

Transitions from one firearm to another will be discussed during the stage briefing, as will safety concerns. When you analyze a stage and determine your strategy, think about your rifle equipment and how you can most-quickly and accurately make your hits.

As you evaluate a stage during your walkthrough, assess how you will shoot it. Observe how other shooters in your division shoot the stage

because they may take a different approach.

Competitors in a different division may shoot the stage differently because they have different equipment or specific equipment restrictions. Play the stage to your strengths, whether it is your body frame size or firearm discipline.

AMMO SHORTAGES

In recent years, rifle and

AMERICAN TACTICAL

G.S.G.

GERMAN SPORT GUNS MP-40 .22LR
MSRP: \$539.95

GSG MP-40 - 22LR
Black Bakelite Furniture
Comes in WW2 style wooden crate
All metal construction
Steel 28RD Mag

800.290.0865 - www.AmericanTactical.us



FIELD TESTED

MSR

SUITABLE FOR MANY CHORES



HOME DEFENSE IS JUST ONE GOOD
OPTION FOR THE BERETTA ARX 100

STORY AND PHOTOS BY BOB CAMPBELL

Patience is a virtue.

Beretta's ARX 100 has been long anticipated and was well worth the wait.

It is identical in most respects to Italy's newest service rifle, the ARX 160, except for the fully automatic bang switch. The ARX 160 is a modular design with a polymer receiver housing a modern short-stroke piston action, a quick-change barrel and a fully ambidextrous profile. It has seen action in Afghanistan and has earned an excellent reputation.

I had a chance to review the ARX 100

so you can learn what it's made of and what kind of reputation it has.

FIRST LOOK

The ARX 100 uses new materials and strict quality control. Attention to detail and cost control result in a rifle that lists for just shy of \$2,000.

This is a truly ambidextrous rifle with excellent interchangeability and ambidextrous options. It isn't a rifle with a safety pinned into the design for left-handed shooters. The ARX 100 is bilater-

BERETTA ARX 100 SPECS

ACTION Gas-operated semiautomatic

BARREL LENGTH 16 inches

BARREL TWIST 1 in 7 inches

MAGAZINE CAPACITY 30

CALIBER 5.56mm

OVERALL HEIGHT 8.5 inches

OVERALL LENGTH 35.5 inches

OVERALL WIDTH 2.75 inches

SIGHT RADIUS 1.25 feet





→ A good-quality padded case holds the rifle, a magazine and owner's manual.

ally symmetrical. It is fully two sided. The selector controls and the magazine release are true ambidextrous units.

Those used to the left-hand bolt release and right-hand magazine release of the AR-15 will quickly acclimate to the ARX 100. The rifle features a rotating safety lever

just above the AR-15-type handle. The magazine release is located ahead of the trigger guard within easy access. The bolt lock is located inside the trigger guard assembly and is also fully ambidextrous. Ambidextrous operation doesn't mean that a left-handed person may use the rifle. Instead it has full combat capability

for any person to switch shoulders and deliver fire with the rifle from any position.

Cartridge case ejection defaults to right hand. However, a bolt buried in the receiver may be pressed to the left with a cartridge nose for left-hand ejection or to the right for right-hand ejection. This capability is because of the

bolt's dual-extractor design. There is no dust cover, so the ejection port is always open on both sides.

If the magazine release does not function correctly, there is a button just in front of the trigger guard. This makes a total of three magazine release buttons. The third lever is actually a lock





Field stripping the AMX 100 isn't difficult — this is a first-class modular design.

rather than a button. It is more like the AK-47 than the AR-15 type release, while the primary release is a close copy of the AR-15. The third release seems ideal for gloved-hand use.

The charging handle reciprocates with the bolt, unlike the AR-15. The receiver is made of modern impact-resis-

tant polymer. The receiver features a full-length rail for mounting optics.

The barrel, which is manufactured in the Beretta facility in Maryland, is a nitride-treated 16-inch tube with a 1-7 twist rate. It is designed to make easy switches to calibers such as the 6.8 and .300 Blackout possible.



The AMX 100 is a product of the Future Soldier program and it showed at the range.



The AMX 100 is very controllable.

Flip-up battle sights are calibrated for the NATO green-tip 62-grain load, so this is the load I used primarily for testing. The front post is the usual rotating post, which will be familiar to anyone who has used an AR-15 type battle sight.

However, the rear sight is worth some study. The six-aperture sight offers excellent practical accuracy with apertures for short-range to 600 yards. The first two diopters are the same diameter with one slightly higher than the

other and the final aperture is smaller for long-range use.

The trigger is a typical military-type that will not win over any target shooters but breaks clean at over 9 pounds and does the business.

There are four slots for the sling supplied with the rifle. The stock is adjustable for length of pull and may be folded for easy storage and carry. The stock folds to the right against the receiver.

An adjustable gas block is set for 5.56mm NATO and works fine with the commer-

cial .223 Remington loads tested. The second position would be useful with lower power loads. Steel-cased bulk loads often generate less recoil impulse and the adjustable gas block could be useful with handloads as well.

RANGE TIME

Range work was hardly work.

This rifle was a great fun gun with much to recommend. The Beretta was run dry with no lubrication as recommended by the manufac-

turer. I have cleaned the rifle several times, but as of this date more than 600 rounds were fired without a single failure to feed, chamber, fire or eject

When I fired it, the feel was different from the AR-15 because there is no buffer spring. As such, the impression may be that the rifle generates less recoil than the AR-15, but it is simply moving less.

The hand may not be stretched forward to gain control of the rifle in rapid-fire



LEFT: An adjustable gas block allows the use of a wide range of loads. RIGHT: Just press this bolt to one side or the other to choose right or left cartridge ejection.



close-quarter work as I find possible with the AR-15, but the rifle is fast and accurate at combat ranges. At no time did I feel the need for gloves while firing the ARX 100.

Among the loads used with considerable success was the Federal American Eagle 62-grain, Green Tip load.

The rifle handles well, is reliable and seems accurate enough for most tasks. The rifle was also fired with the Federal 55 grain JSP with good results.

The trigger and sights are not conducive to National Match accuracy, but the rifle isn't intended as a match rifle. However, accuracy is always interesting.

I fired from the bench at 100 yards and a smaller aperture was used for accuracy purposes, resulting in the rifle

firing high. This is fine, as I was firing for groups.

The rifle was fired with several loads for this review, including the American Eagle 62-grain, the Hornady 55-grain JSP, the Tula 55-grain FMJ and the Black Hills 77-grain OTM. The Tula load was the least-expensive tested, and it posted 3.25 MOA average for three three-shot groups, with the largest groups well over 4 inches.

The American Eagle and the Hornady loads traded for accuracy with each averaging

two MOA. The single best group was a 1.25-inch, three-shot effort at 100 yards with the Black Hills 77 grain OTM. The average for the Black Hills load was 1.5 MOA.

The ARX 100 might be expected to perform better with a good-quality optical sight.

RELIABLE AND READY

The test rifle never failed to feed, chamber, fire or eject with an eclectic selection of ammunition. At this point I would be surprised by a malfunction.

The ARX is a good all around area defense rifle, an outstanding choice for home defense and useful for any role a semi-automatic .223 caliber rifle may fill. The Beretta ARX 100 is an interesting and useful rifle, suitable for many chores. **MSR**

THE AUTHOR: Robert "Bob" Campbell is a writer in the firearms, personal defense and outdoor field. He holds a degree in criminal justice and served for many years as a peace officer. His work spans subjects as diverse as history, psychology, ballistics and police procedure.

SCOPES

MSR



Whether you're target shooting, hunting or on a tactical mission, accuracy is essential. You need a scope that will deliver bright, clear images so you can hit your target with ease. The scopes detailed here offer everything you need to find, mark and hit your target.

LOCKED ON



SHOOT LIKE AN ELITE PRO WITH THESE
RUGGED, HIGH PERFORMANCE RIFLESCOPES

BY DEVLIN SMITH

SWAROVSKI OPTIK

PRODUCT: Z3

WEBSITE: SwarovskiOptik.com

Swarovski Optik's Z3 line of 1-inch riflescopes includes a 3-9x36 model. The slim construction allows it to be mounted close to the barrel. Improved anti-reflective lens coatings deliver the highest optical performance in all light conditions. The scopes are offered in a wide range of standard reticles, long-range reticles and the Swarovski Optik Ballistic Turret. The scopes are also available in 3-10x42 and 4-12x50 models.



MSRP: \$1,029

SPECIFICATIONS

Magnification: 3x–9x

Length: 9.8 inches

Weight: 13.1 ounces



MSRP: \$159.95

SPECIFICATIONS

- **Magnification:** 4.5-14x
- **Length:** 1.15 feet
- **Weight:** 1.35 pounds

GAMO OUTDOOR USA

PRODUCT: BSA 17 Super Mag Scope Series

WEBSITE: BSAOptics.com

Gamo Outdoor USA's BSA 17 Super Mag Scope Series was designed specifically for the Winchester 17 Super Mag Cartridge and features a patent-pending drop compensation reticle engineered for 20-gr. and 25-gr. bullets. The line includes illuminated red, green and blue reticle versions.

The scopes feature 3-inch eye relief, a fast-focus ring with adjustable objective lens, fully coated optics and haze filters. The waterproof, shockproof and fogproof scopes have a two-piece aluminum body. The scopes include a limited one-year warranty.



MSRP: \$117.95

SPECIFICATIONS

- **Magnification:** 1-4x
- **Length:** 9.6 inches
- **Weight:** 15.2 ounces

GAMO OUTDOOR USA

PRODUCT: Tactical Weapon 30mm Tube Scope Series

WEBSITE: BSAOptics.com

BSA Optics Tactical Weapon 30mm Tube Scope Series was designed specifically for military and law enforcement applications. The line includes a 30mm

tube diameter allowing in more light, thus improving visibility and clarity, a mil-dot reticle and a fixed 100-yard parallax setting.

The scopes feature 3.5-inch eye relief, a fast-focus ring and haze filters. The waterproof, shockproof and fogproof scopes have a two-piece aluminum body. The scopes come with a limited lifetime warranty.



MSRP: \$89.95

SPECIFICATIONS

- **Magnification:** 1-4x
- **Length:** 9.5 inches
- **Weight:** 14.2 ounces

GAMO OUTDOOR USA

PRODUCT: Tactical Weapon 223 Scope Series

WEBSITE: BSAOptics.com

The BSA Optics Tactical Weapon 223 Scope Series was designed specifically for military and law enforcement applications. The scopes include two sets of interchangeable turret caps (.223 Cal & .300 AAC Blackout) that have specific click markings for three different color-coded grain weights per cap. The scopes come with a limited one-year warranty.



MSRP: \$307.25

SPECIFICATIONS

- Magnification: 1-4x
- Length: 10 inches
- Weight: 1 pound



BARKSA

PRODUCT: SWAT-AR 1-4x28

IR Tactical Scope

WEBSITE: Barska.com

The compact, low-profile SWAT-AR 1-4x28 IR was designed for tactical rifles such as the popular AR-15 platform. The 1-4x zoom of the SWAT-AR makes the scope ideal for close- to mid-range targeting, and the illuminated Mil-Dot reticle gives the shooter an advantage in low-light situations. The shooter is able to switch between a red or green reticle and adjust the brightness to find the optimal reticle for the environment.

The fully multi-coated optics of this scope aim to provide the shooter with a sharp, clear image with great contrast. The SWAT-AR 1-4x28 also comes nitrogen-purged and O-ring-sealed for complete waterproof and fogproof protection.

Other features of the SWAT-AR 1-4x28 IR scope include external locking windage and elevation turrets, and an angled sniper-edged sunshade.

Lowest Prices from USA Pharmacies *FDA-approved Viagra, Cialis, Levitra and more
USPS and FedEx next day shipping available * 550,000 Customers served since 1998

HABLAMOS ESPAÑOL

VIA MEDIC
SAFE • SECURE • DISCREET

BBB A+ Rating

ACCREDITED BUSINESS

★ CALL TOLL FREE ★
800-467-0693

Visit **Viamedic.com/TACT** for special offers



MSRP: \$2,556

SPECIFICATIONS

- **Magnification:** 1.1-4x
- **Length:** 11.37 inches
- **Weight:** 1.03 pounds

CARL ZEISS SPORTS OPTICS

PRODUCT: Victory HT 30mm Riflescopes

WEBSITE: Zeiss.com

Carl Zeiss Sports Optics super-bright Victory HT Rifle-scope line is available in 1.1-4x24mm. The riflescopes achieve light transmission of near 95 percent thanks to the state-of-the-art proprietary High Transmission (HT) glass

by Schott and enhanced T multi-layer coatings. The Victory HT also comes with Zeiss' reticle No. 60, which is non-magnifying in the second focal plane for minimum target coverage and activated by pulling out the knob on the left side of the scope. Turning the knob then controls the brightness. When the knob is pushed back in, the illumination turns off.

The Victory HT riflescopes are also designed with a slim

ocular for a lower profile and come with Zeiss' ASV + turret for quick ballistic compensation. Each scope will have a complete set of ballistic rings for any hunting load, allowing for easy, fast and accurate target acquisition and distance compensation with a turn of the elevation turret.

The Victory HT riflescope is also offered in 1.5-6x42, 2.5-10x50 and 3-12x56 models.



BUSHNELL

PRODUCT: AR Optics 1-4x24mm Riflescopes

WEBSITE: Bushnell.com

Bushnell is offering two 1-4x24mm riflescopes in the AR Optics line that feature true one-power magnification, high-quality optics and target turrets.

The AR Optics line has fully multi-coated optics and provides exceptional light transmission and image clarity. Built on a durable, one-piece 30mm

tube, the riflescope has plenty of travel for extended-range elevation adjustments. In addition, target turrets and a fast focus eyepiece allow shooters to make quick adjustments in the field.

The AR91424 features the Drop Zone 223 Reticle, a bullet-drop compensation reticle with a 100-yard zero and aiming points out to 500 yards. The reticle is calibrated for .223/5.56mm ammunition with a bullet weight range of 55 to 62 grains. The target turrets on this model have a half-MOA click value.



\$199.99 for the AR91424 (shown), **\$299.99** for the AR91424I

SPECIFICATIONS

- **Magnification:** 1-4x for AR91424 and AR91424I
- **Length:** 9.5 inches for AR91424, 9.4 inches for AR91424I
- **Weight:** 1.05 pounds for AR91424, 1.08 pounds for AR91424I

BURRIS

PRODUCT: AR Riflescopes

WEBSITE: BurrisOptics.com

The AR Riflescopes line of tactical optics gives shooters a custom optic to match their rifle. A customized elevation turret matches the shooter's ammunition, and a convenient Wind Map helps determine wind hold-off for 5.56 (shown) or 7.62 cartridge.

The scopes are equipped with high-performance glass and multi-coated lenses for excellent brightness and clarity. A double-internal spring tension system allows each scope to hold zero under shock, recoil and vibrations, and the precision-gauged and hand-fitted internal assemblies maintain a consistent point of impact through the entire magnification range. The waterproof, fogproof scopes are backed with Burris' Forever warranty.

MSRP: \$570

SPECIFICATIONS

- **Magnification:** 4.4-14x
- **Length:** 1.08 feet
- **Weight:** 1.13 pounds



CARL ZEISS SPORTS OPTICS

PRODUCT: Terra 3X 50mm

Low-Light Riflescopes

WEBSITE: Zeiss.com

Carl Zeiss Sport Optics Terra 3X riflescope line now includes 50mm low-light models 3-9x50 Z-Plex and the 3-9x50 RZ6 models. Terra 3X scopes feature Zeiss MC anti-reflective coatings and 1/4-MOA adjustments.

The scopes featuring a larger 50mm objective are perfect for low-light conditions, offering hunters an opportunity to extend their day of shootable light. Terra 3X also includes 4-12x50 Z-Plex and 4-12x50 RZ8 models.



\$449.99 with Z-Plex reticle, **\$499.99** with RZ6 reticle

SPECIFICATIONS

Magnification: 3-9x
Length: 1.1 feet
Weight: 1.09 pounds



FIREFIELD

PRODUCT: Agility 3-9x40IR

WEBSITE: Fire-Field.com

Firefield's Agility 3-9x40IR illuminated reticle riflescope features a nitrogen-filled, IPX6-rated weatherproof tube and fully multi-coated lens system. Designed for use on rimfire, centerfire and air rifles, the scope is equipped with a green or red illuminated duplex reticle option. The fast-focus eyepiece allows shooters to acquire their targets quickly and efficiently. Simply rotate the eyepiece to bring the reticle and target into clear focus. The low-profile windage turret caps provide protection from impact and ensure the scope remains zeroed in. The variable 3-9x magnification makes this hunting riflescope adaptable for medium- to large-sized game. Featuring a fine duplex reticle and ¼-inch click MOA adjustment, the 3-9x40IR provides quick target acquisition at all distances. With the extended magnification, hunters can hone in on their prey up to 200 yards out comfortably. A 4x32IR model is also offered.



MSRP: \$71.99 for 3-9x40IR

SPECIFICATIONS

Magnification: 3-9x

Length: 311mm

Weight: 15.3 ounces



NIGHTFORCE

PRODUCT: 4-14 x 56 SHV Riflescope

WEBSITE: NightforceOptics.com

The 4-14x56 SHV (Shooter Hunter Varminter) is offered in illuminated and non-illuminated reticle versions. Illuminated models feature center-only reticle illumination, which helps prevent low-light flare. External illumination control is incorporated with the side parallax adjustment. The SHV includes a fast-focus European-style eyepiece and a new, streamlined design. Each model has an adjustable parallax control located on the left side of the riflescope, marked in yards that can be adjusted by the shooter without removing the user's eye from the shooter-ready position.



MSRP: \$995 non-illuminated (shown),
\$1,195 illuminated

SPECIFICATIONS

Magnification: 4-14x

Length: 1.23 feet

Weight: 1.68 pounds for non-illuminated scope and 1.78 pounds for illuminated scope



MSRP: \$799.95

SPECIFICATIONS

Magnification: 1.5-6x

Length: 10.5 inches

Weight: 1.14 pounds

NIKON

PRODUCT: M-308 Riflescope

WEBSITE: NikonSportOptics.com

The M-308 riflescope is designed for use in heavier-caliber AR platform rifles. The M-308 4-16x42 is available with the BDC 800 reticle or Nikoplex reticle with Rapid Action Turrets. The high-magnification-range zoom makes it the ideal optic for AR10 platforms.

Developed specifically for the trajectory of the .308 Winchester/7.62x51 NATO round with 168-grain hollow point boat-tail Match bullet, the new BDC 800 reticle offers shooters unique open circles, dots and hash marks from 100–800 yards.

SIGHTRON

PRODUCT: SIH-TAC Series

WEBSITE: Sightron.com

The SIH-TAC39x40 offers the shooter exposed tactical-style turrets that are resettable to zero. The scope is packed with such features as fully multi-coated lenses and a fast focus eye bell. Oversized non-slip finger-adjustable tactical turrets allow for quick and easy adjustments ready to meet your needs.



MSRP: \$209.99

SPECIFICATIONS

Magnification: 3-9x

Length: 11.9 inches

Weight: 15 ounces



MSRP: \$279.95

SPECIFICATIONS

Magnification: 3x–9x

Length: 1.03 feet

Weight: 1.4 pounds

WEAVER

PRODUCT: Kaspas Illuminated Reticle Scopes

WEBSITE: WeaverOptics.com

Weaver Kaspas Series Illuminated Reticle Scopes deliver bright clear images, fog-free viewing and illuminated center crosshairs that make target acquisition quick and easy under harsh, bright sun and low-light conditions. The scopes feature fully multi-coated lenses for edge-to-edge clarity and purged nitrogen-filled tubes to eliminate internal fogging.



MSRP: \$91

SPECIFICATIONS

Magnification: 4x

Length: 9.8 inches

Weight: 13.1 ounces

TRUGLO

PRODUCT: Tru-Brite Xtreme 4x32

Compact Tactical Rifle Scope

WEBSITE: Truglo.com

Tru-Brite Xtreme Series scopes are built with high-quality optics that offer shooters a bright, clear, high-contrast field-of-view in any situation. The dual-color illuminated reticle helps ensure exact shot

placement in low-light conditions. The large diameter fingertip windage and elevation knobs allow for easy adjustments when sighting in.

The reticle can be used in black without illumination. The scopes offer 4-inch eye relief. The fully coated lenses provide maximum brightness, clarity and contrast. The scopes feature a durable, scratch-resistant, non-reflective matte finish.

CARL ZEISS SPORTS OPTICS

PRODUCT: Terra 3x 1-Inch Riflescopes

WEBSITE: Zeiss.com

Terra 3x riflescopes pack powerful, uncompromising optical performance into a lightweight, yet extremely rugged, compact 1-inch design. Zeiss optics with MC anti-reflective coatings produce bright, high-contrast images, and 1/4-MOA adjustments provide 100-percent repeatability, click-by-click.

The scope is available with Z-Plex or RZ6 ballistic reticles. This all-purpose scope features a slightly larger objective to provide hunters with an added advantage in low-light situations.



MSRP: \$444 with
Z-Plex reticle, **\$499**
with RZ6 reticle

SPECIFICATIONS

Magnification: 3-9x

Length: 1.03 feet

Weight: 14.8 ounces

GET YOUR OFFICIAL **GUN WORLD** T-SHIRT TODAY!



ONLY
\$19.95
PLUS S&H



GUN WORLD

BUY THEM ONLINE AT ENGAGEDMEDIAMAGS.COM OR CALL US AT 800-764-6278

100% Pre-Shrunk Cotton * Black Shirt with Gold and Grey Screen Print



MSRP: \$699.95 for the non-illuminated reticle model (shown), **\$899.95** for the illuminated reticle version

SPECIFICATIONS

Magnification: 1.5-6x
Length: 1.01 feet
Weight: 1.26 pounds

NIKON

PRODUCT: M-300 BLK Riflescope

WEBSITE: NikonSportOptics.com

The M-300 BLK riflescope comes in 1.5-6x42 magnification with a 30mm main body tube for a wide adjustment range. It features Nikon's BDC SuperSub reticle that is compatible for use with both supersonic and subsonic ammunition. The BDC SuperSub reticle is calibrated for .300 Blackout supersonic ammunition and offers shooters open-circle aiming points out to 600 yards, in 100-yard increments, with additional hash marks at 50-yard distances.

The M-300 BLK is also available with an illuminated reticle to give shooters an added advantage during low-light situations. The illuminated reticle can be adjusted to different brightness settings using the push buttons on the eyepiece and has up to 32 different levels of intensity for the orange center dot. When the illumination feature is turned off, the last brightness level is saved. The illuminated reticle operates on a 3-volt lithium battery.



MSRP: \$265.49

SPECIFICATIONS

Magnification: 3-9x
Length: 1.03 feet
Weight: 11.5 ounces

WEAVER

PRODUCT: KASPA 3-9x40mm Scope with Pink Accents

WEBSITE: WeaverOptics.com

Weaver's Kasper 3-9x40mm riflescope features one of the Kasper line's most popular configurations topped with pink turret caps, a pink adjustment dial, pink logo and accent ring. These U.S.-engineered scopes deliver bright clear images, fog-free viewing and rugged construction. The scope's fully multi-coated lenses offer edge-to-edge clarity. It features a fogproof, shockproof and waterproof construction.

DOUBLE DOWN & SAVE BIG

**ONLY
\$42.95**



Combine 1 Yr subscription to **Gun World** with 1 Yr subscription to **American Survival Guide** and save **69% off** the cover price

TO SUBSCRIBE

- Log on to www.engagedmediamags.com/combo_gwasg
- Call our toll free number 800-764-6278
- Fill out the order form below and mail it with your payment information to Beckett Media LLC, Lockbox # 70253, Philadelphia, PA 19176-9883

☒ **YES!** sign me up for a subscription to Gun World and American Survival Guide

That is a total of 21 issues for a total savings of \$97.84 off the cover price

Method of Payment ☐ Check enclosed ☐ Credit Card ☐ Money Order

Payment through credit card ☐ Visa ☐ MC ☐ AMEX ☐ Discover Name on credit card _____

Credit card number

Expiration da / /

Subscriber name	First	MI	Last
-----------------	-------	----	------

Address _____

City _____ State _____

Phone _____

Email _____

Signature _____ Date ____/____/____

Enter Promo Code
A743K4V1

For a full listing of our titles, visit www.engagedmediamags.com today!

Allow 6 to 8 weeks for delivery of first issue. Outside US, add \$43 per year for postage. Pay in US funds only.

FIELD TESTED

MSR

The M&P-10 test rifle is topped by a Weaver Grand Slam 3-12x42mm riflescope. The smaller AR-15 wears an Eotech Holosight.





M&P10 SPECS

CALIBER: .308WIN/7.62 x 51
ACTION: Semiautomatic
CAPACITY: 5 rounds
MAGAZINE TYPE: Metal
BARREL LENGTH: 18 inches/
45.7 cm
BARREL TWIST: 1 in 10 inches
5R rifling
TRIGGER PULL: 6.15 pounds +/-
OVERALL LENGTH: 37.5
inches/95.25 cm
STOCK: Magpul MOE rifle stock
WEIGHT: 8.1 lbs./3,497.3 g
BOLT MATERIAL: 9310 steel
BARREL MATERIAL: 4140 steel
BARREL FINISH: Durable,
corrosion-resistant finish
RECEIVER MATERIAL: 7075 T6
aluminum
RECEIVER FINISH: Camouflage
CHROMED COMPONENTS: Gas key,
bolt carrier, firing pin
MSRP: \$1,729

HUNTER'S CHOICE



THE ACCURATE SMITH & WESSON M&P 10 WILL GET THE JOB DONE

BY STAN SKINNER

Smith & Wesson's M&P-10 expands the S&W line of AR semiautomatic rifles far beyond the well-known limitations of the smaller AR-15 platform. Chambered for the full-power 7.62x51mm/.308 Winchester cartridge, the M&P-10 provides adequate power to take deer-sized game at more than 500 yards.

I tested this rifle and following are the results.

A SHORT HISTORY

The S&W M&P-10 is based on the Armalite AR-10, which nearly became the U.S. Army service rifle in tests at Fort Benning, Ga. in 1956. The eventual winner, of course, was a Springfield Armory design, the T-44, which entered service as the M-14.

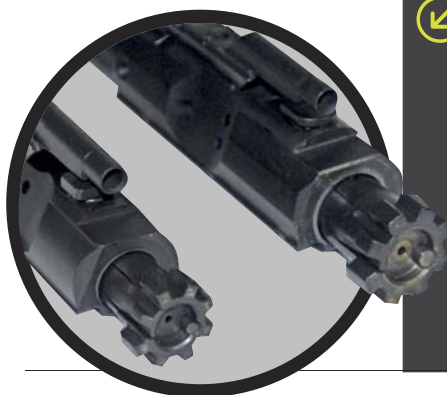
The AR-10 was redesigned and scaled down to become the AR-15. It

was first adopted by the U.S. Air Force and then by the U.S. Army as the M-16. Battlefield reliability issues spurred changes that became the M-16A2 in the 1980s. Numerous variations followed that resulted in the current M4 carbine, which has seen service in Iraq and Afghanistan.

This short history is relevant to the S&W M&P-10 because most of the



↗ Although the M&P-10's bolt carrier assembly (top) is significantly larger than the AR-15 carrier, the gas keys are almost identical.



↙ The M&P-10 bolt carrier assembly at right shows the more-robust locking lugs and larger bolt face required for the 7.62mm NATO compared to the AR-15 carrier at left.



↑ The M&P-10's MagPul MOE buttstock storage compartment provides space for cleaning supplies or other small items.

modifications and refinements seen in the M-16 A2 and M-4 variants (and a few others) have been incorporated into the M&P-10. In fact, the M&P-10 more closely resembles the M4 than the early AR-10.

M&P-10 REFINEMENTS

Among the refinements found on the M&P-10 are a collapsible stock, flattop receiver with a Picatinny rail, bolt forward assist, brass deflector and Picatinny gas block with no fixed front sight. Other minor changes include an ambidextrous safety, bolt stop and magazine release, as well as a redesigned trigger guard.

The M&P-10's magazine well is larger than on the AR-15/M-16 to accommodate the longer magazine necessary for

the greater length of the .308 Winchester cartridge.

OUR TEST RIFLE

The test rifle arrived in a Smith & Wesson hard case. Along with shipping and warranty documents came two five-round magazines. The M&P-10's flattop receiver is machined from 7076 T6 aircraft-grade aluminum and, as mentioned earlier, is fully ambidextrous. Designed as a hunting rifle, the M&P-10 has a camo finish on the mid-length fore end, receiver and fixed buttstock.

The 18-inch barrel measured slightly under 0.75 inches at the muzzle, which is a fairly heavy profile. On a short barrel, the heavy profile will make it fairly stiff, which minimizes barrel vibrations. The

extra mass is also slower to heat during sustained fire. It was constructed from 4140 chrome moly steel, has a 1 in 10-inch 5R (five-groove) and recessed target crown. This rifling pattern was developed in Russia to minimize bullet upset, reduce barrel fouling and be easier to clean. The barrel finish is corrosion-resistant, flat black melonite.

Factory specifications call for a 6.15-pound trigger pull, and the test rifle was only slightly lighter. The trigger was fairly crisp with only a hint of movement before the break. My Lyman electronic trigger gauge indicated a three-shot average at an eyelash under 6 pounds even.

Although other models of the M&P-10 have a six-position collapsible stock, this model comes with a fixed MagPul MOE



A surplus 7.62x51mm fired case (second from left) by Australia Defense Industries shows its small rifle primer. Commercial brass from Winchester, Hornady and PMC use a large rifle primer.

... EVEN IF YOU ARE UNDULY SENSITIVE TO RECOIL, YOU'D HAVE LITTLE TO COMPLAIN ABOUT.

buttstock. This well-designed stock has an integral 1.25-inch sling loop and two QD mounting points. The replaceable anti-slip butt pad lies atop an internal storage compartment accessible by a sturdy hinged door with a push-release latch on the left side. After considerable effort (probably a good idea), the latch released to expose a cavity that is large enough to store small items such as spare iron sights and cleaning supplies.

The M&P-10's upper and lower receivers are mated with two captive takedown bolts in the fashion familiar to AR-15/M-16 users. With the bolt forward, I withdrew the rear takedown bolt and the upper receiver pivoted forward on the forward takedown bolt for easy fieldstripping. By withdrawing the for-

ward takedown bolt, the upper receiver detaches completely from the lower in the conventional manner.

SCOPE & MOUNT

Atop the Picatinny rail is a Weaver Grand Slam 3-12X42mm riflescope, which has a side-mounted parallax adjustment knob. It is attached with a Warne SKEL modular mounting system. The SKEL mount raises the scope high enough to readily clear a large objective bell and positions the front ring forward of the upper receiver by 1.75 inches, allowing the optics to be mounted farther forward. This allows shooters to use a more upright head position whether standing or prone, thus achieving a less-stressful shooting position.

A Surprising Fact

In nearly every article about the AR operating system, you will see it referred to as "a direct impingement" system. Conventional wisdom accepts this as fact. However, two authoritative sources disagree — Eugene Stoner, the inventor, and the U.S. Patent office. Here's a quote from Stoner's patent application:

"This invention is a true expanding gas system instead of the conventional impinging gas system. By utilization of a metered amount of gas from the barrel, the automatic rifle mechanism is less sensitive to different firing pressures caused by variations in the propelling charge."

So Eugene Stoner says it's not a direct impingement system and the U.S. Patent Office agrees because it issued the patent. This would not have happened if they regarded it as a direct impingement system because such a system had been in the public domain since the turn of the 20th century.

The difference is subtle. The combustion gas is delivered to the gas key, a hollow tube that is an appendage staked to the top of the bolt carrier. It does not impinge on the bolt or the bolt carrier.

Instead, it transforms the bolt carrier into a piston that unlocks the bolt and transports it to the rear to extract the fired case.

There you have it. Now, whom are you going to believe? The inventor and the government agency that approved his patent? Or a few gun writers who are just parroting false information they read somewhere?



The large magazine well of the M&P-10 engulfs a 30-round AR-15 magazine. A five-round M&P-10 magazine is at right.

... WITH MORE THAN 100 ROUNDS FIRED, THE M&P 10 FUNCTIONED FLAWLESSLY WITH THE FOUR LOADS WE TRIED.

I found the higher scope position to be helpful at the shooting range despite a fixed and poorly positioned concrete shooting bench and seat that practically guaranteed an unstable firing platform. This would impact the M&P-10's accuracy testing later.

RANGE TESTING

Unfortunately, time constraints at the shooting range prevented an exhaustive function test, but with more than 100 rounds fired, the M&P 10 functioned flawlessly with the four loads we tried. Ejected cases were clean and un-

dented, and firing pin dents were centered and well-hit.

The first load we tried was Australian surplus 7.62x51mm NATO-standard ball ammo, which uses a 147-grain bullet with a full metal jacket. My Oehler M35P chronograph, which was set up with the near screen 10 feet in front of the muzzle, gave it an average of 2,581 fps. The low velocity was not a surprise because of the short 18-inch barrel.

Recoil was mild and I hardly noticed it. I have a fair amount of recoil tolerance, but I suspect that even if you

are unduly sensitive to recoil, you'd have little to complain about.

As I loaded one of the five-shot magazines furnished with the M&P-10, I noticed an oddity. The ADI (Australian Defense Industries) headstamped cartridge case held a small rifle primer. Except for custom-ordered cases used by a few rifle competitors, all 7.62mm/.308 cases have a large rifle primer. For whatever reason, accuracy with this 32-year-old ammo was erratic and I turned to the three commercial brands I had for testing.

First up was PMC. This

load was tipped with a 147-grain, full metal jacket bullet similar to military-issue. It was significantly quicker than the Aussie surplus, averaging 2,645 fps with a very respectable standard deviation of 11. Accuracy was very promising, as it delivered a 100-yard group measuring .523.

Then Murphy arrived.

MURPHY MAKES AN APPEARANCE

As mentioned earlier, the concrete shooting bench and seat were fixed in an awkward arrangement that necessitated

thick carpet pads to achieve a reasonable supported shooting position. I found it difficult to obtain a proper eye relief and consistent cheek weld, which resulted in periodic flyers that in one case opened a group to a tad over 2 inches.

The same problem occurred with Winchester Power Point 150-grain softpoint ammo and Hornady Superformance 150-grain InterBond loads. Even with flyers, the M&P-10 produced groups that ranged from slightly more than 1.5–1.75 inches. Tantalizingly, the Hornady Superformance did produce one group of .721 inches.

Chronographing the Winchester Powerpoint yielded an average of 2,757 fps and a standard deviation of 22. Hornady Superformance was significantly faster at 2,851 with a standard deviation of 13.

POSITIVE RESULTS

Time constraints prevented me from sorting out these problems and I look forward to a more controlled look at the M&P-10's potential at a later date. However, I like what I saw and I feel certain the M&P-10 will prove itself as a fine sporting rifle. **MSR**

ABOUT THE AUTHOR: Stan Skinner, the editor-in-chief, of *Modern Sporting Rifles*, is a recognized authority on tactical and hunting firearms, as well as ballistics and handloading. He is the author of the "Shooter's Bible Guide to Extreme Iron" and has written for a number of firearms publications.

What Might Have Been

Designed by Eugene Stoner and introduced in 1956, the AR-10 came close to being the U.S. Army's service rifle instead of the M-14 that actually replaced the M1 Garand.

Manufactured by Armalite, which was then a subsidiary of Fairchild Aircraft Corp., the AR-10 was scarcely out of prototype status when the Army began testing several rifle designs to replace the legendary M1 Garand.

In the fall of 1956, Armalite quickly hand-manufactured two "production" sample rifles as late entries into competition with two entries from Springfield Armory (T44E4 and T44E5) and one from Fabrique Nationale (T48).

The AR-10 was a radical design for the 1950s, featuring a phenolic resin, straight-line stock, elevated iron sights on a carry handle and an adjustable gas system. The rifle also featured the now-familiar hinge and takedown pins that enabled quick fieldstripping and access to the breech end of the barrel for cleaning.

At 6.85 pounds empty, it was significantly lighter than the other entries, but

it handled the then-new 7.62mm NATO round flawlessly. The AR-10 didn't look like anybody's idea of what a battle rifle should look like, but despite its radical appearance, the testers' initial impressions were favorable. Some even commented that the AR-10 was the best lightweight automatic rifle ever tested at the armory.

However, the newly minted AR-10 design was at a severe disadvantage pitted against more mature, tested designs. When a previously untried composite aluminum/steel barrel burst during torture testing, the Army advised against adopting the AR-10. Subsequently, the Army chose the Springfield T-44, which entered service as the M-14.

Hamstrung by bungled opportunities for sales outside the United States, the original AR-10 achieved only limited success with fewer than 10,000 rifles manufactured. It might have been consigned to oblivion, except that the U.S. military bought a scaled-down version chambered for a new cartridge that eventually was standardized as the 5.56x45mm NATO. As we all know, this new rifle called the AR-15 entered service as the M-16 and the rest is history.



The author had to use a bench rest bag on top of a sandbag with only his support hand for a rear rest, which contributed to inconsistent accuracy testing.



HOME DEFENSE

MSR



Be ready for
circumstances
like this.

OL' RELIABLE



FOR HOME DEFENSE, THE MODERN SPORTING RIFLE
IS A GREAT OPTION

BY RICHARD CRAYS

THINKSTOCK

It was 1987. Maybe 1988.

I was teaching concealed carry and basic handgun classes as a side venture. One day a fairly affluent couple approached me. They wanted private lessons with the focus being home defense tactics. They also wanted to develop a response plan for home invasion and kidnapping attempts, so I went to work.

HOME DEFENSE PLAN

I worked up the foundation for a generic home defense plan (HDP), but they also wanted the benefit of an on-site review of doors, windows, lighting, emergency preparation and an alarm system. During that security survey, I found a bunch of problematic issues that had to be resolved.

They lived in a moderately remote area about 13 miles outside of an upscale mountain town in the Rockies. Some of their hallways were 50 feet long with access doors and/or rooms at each end, and that was only the beginning. The home was about 4,000 square feet with lofts, five bedrooms and three outlying buildings. It sat on about 40 acres.

In conjunction with the anticipated response time by law enforcement being 20 minutes at best, we planned for the homeowners to respond to four attackers, alone. Before we addressed the issue of what gun and



The AR is a great option for a home defense weapon.

how many they needed, we tackled the obvious first hurdle. How far could they effectively shoot and how many bad guys could they engage at one time?

THE RANGE

On the range, we spent about nine hours, went through several hundred rounds of ammunition and dirtied about 15 different guns. What I discovered is that regardless of how committed one is to his own survival, novices should only be taught one weapon system and all their guns should function on that same system.

Up until that time I had suggested a short-barreled 20-gauge shotgun and a revolver in the nightstand as the basic HD weapons. Keeping these guns in different rooms or where the family members

spent most of their time would be key. However, even the time of the day or the threat that existed could play a factor in placement. Through this portion of the planning, I could see quickly that that wouldn't really work for these folks. Both husband and wife were great students, so long as I didn't change details. When I talked about the safety switch to no safety switch to pump action to bolt action to double action to de-cocking lever, I saw uncertainty, confusion and information overload. You can't have that in a gunfight.

Enter the one weapon system that works on a pistol and a rifle — the AR-15/M4 and the 1911.

AR-15

The right thumb works the safety up and down, the

charging handle and the slide both pull straight back to chamber a round. I'll bet you are getting the picture now. They needed a force-multiplier and a weapon that could hit out to distances of 100 yards (the barn), but it worked

WHY THE AR? FACTORS TO CONSIDER

1 Buy the right ammo

2 Consider a suppressor

3 Buy a weapon-mounted light

4 Go with a short barrel

5 Plan for reloading



The Colt AR-15 is shown here with an InForce light.

like the semiautomatic that they already had and were familiar with at the time.

The AR-15, with a short-barreled configuration, could be maneuvered well inside the confines of the home, but could, if necessary, engage threats from as far away as the barn, all while effectively covering several armed assailants.

With the recoil of a .223 being very subtle, Mrs. X

could manage it expertly in no time, unlike the experience she had with the 20-gauge.

Also of importance here is that, then and even now, the most you could have in that 20-gauge would be about nine shells (not including the Kel-Tec KSG at 15 rounds of 2.75 shells or a Saiga with a drum magazine). The weight of the gun was also a problem for Mrs. X, who probably didn't weigh 120 pounds. The

AR-15 was a gun that had low recoil, was lightweight, had a very high capacity, could be reloaded quickly under stress and used the same operating system as the pistol with which she and her husband were already familiar. One solution to all the problems, and we were running and gunning.

WHY THE AR

If you are already running a semiautomatic pistol, you

know the basics of AR-15 platform. If you have an ambidextrous safety on your pistol, you can put one on your modern sporting rifle in about 30 minutes. If your house is set out with long hallways or you expect more than one attacker to break in, you are probably ready to consider this option. Following are key factors.

First, and most important, is the potential for over-penetration of your rounds. You can't load up any old ball ammo and expect it to do anything other than punch a pencil-sized hole through the bad guy, the sheetrock and out the wall into your neighbor's house. In the last few years, there have been several companies that have designed rounds especially for this application. One I was fortunate enough to test a few months ago was the Extreme Shock Home Defense Air Freedom Round, or R2LP. Billed as, "...frangible and reduced ricochet characteristics provide a greater level of safety. A miss on a target won't penetrate through several walls and potentially injure a sleeping fam-

... IF YOU JUST WANT TO BE AS PREPARED FOR THE WORST-CASE SCENARIO AS YOU CAN BE, THE AR IS YOUR BEST OPTION.



Shown here are the Colt AR15 and Springfield 1911.

ily member.” A bit expensive, but if you don’t reload, this might be the best option I have seen.

There are several companies that are making bullets that, whether frangible (compressed copper/zinc with a glue to hold it together) or ballistic tip, have limited penetration of hard barriers. Regardless of which round chosen, it is critical that they are test fired into all the construction materials found in your house before loading up the gun for home defense.

The next issue is sound. It is unlikely you will have time to put on the electronic earmuffs before the fight starts, so you will be deaf after the first shot. If there was only one bad guy, fine, but you have to assume that the coward came with a friend. If you can hear him in the dark, it will be harder to find him. A low-velocity or subsonic round

will be quieter but, unfortunately, not as much as you might think.

Consider paying the \$250 tax stamp and ordering a suppressor for the MSR. It will allow you to hear the bad guy, communicate with your kids or spouse as you move them to the safe room, and to hear the sirens coming so you can put the gun in a safe place before the police come through the door. NOTE: Do not be holding the rifle when the police arrive, it makes them very nervous.

Light would be number three on the list. You can work a small handheld light and the gun at the same time, but not both and a doorknob. Consider putting a weapon-mounted light on the gun. The three big names in weapon-mounted lights are InForce, SureFire and Streamlight. There are also about 10 other companies that make

great lights for just this purpose. When you get it, practice with it every time you shoot. Assume the fight will be at night and in the dark, and you will be ready. If it is light enough to see your attacker, using the light will distract or disorient him.

Next, a shorter barrel is more maneuverable in confined spaces, but it will be louder. With a short barrel, you may need to work with the tuck or over-the-shoulder technique. As you can see in the accompanying photos, neither is hard to master with practice.

Finally, a reload is important. Without going to extremes and having a double-magazine pouch sewn onto your pajamas or going to bed wearing your Go Bag, there are viable options. Stage a magazine on top of the refrigerator, one on the cabinet and maybe one in the linen closet. A great alternative would be to mount one on the stock of

the rifle or to use a dual-mag coupling device. Mine is a First Samco, but there must be 20 manufactures out there for this means of carrying a second magazine. My top choice for this issue is a SureFire 60-round wonder of technology. SureFire also makes a 100-round magazine in the event your home invasion crew brought a lot of bad guys with them.

ALWAYS READY

If you need a light, force-multiplying defensive weapon for use in your rambling estate, or if you just want to be as prepared for the worst-case scenario as you can be, the AR is your best option.

Be safe and shoot straight. **MSR**

FOR MORE INFO

HOME DEFENSIVE AMMUNITION

ExtremeShockUSA.com

RELOADING DATA

Hornady.com

Hodgdon.com

AlliantPowder.com

Speer-Bullets.com

THE AUTHOR: Richard Crays has 39 years of military and law enforcement experience. He is on the board of directors for the International Association of Law Enforcement Firearms Instructors and is the senior firearms instructor for a state law enforcement academy.

SLINGS

MSR

GARREYON



IMPROVE YOUR STANCE AND INCREASE YOUR COMFORT WITH A SLING

BY DEVLIN SMITH

Offered in a variety of styles and made from various manmade or natural materials, a sling is a great accessory to have for a long day's shoot; it will take the weight off your shoulders and help you improve your stance. Following are some great choices.



Vero Vellini

PRODUCT: Tactical Two-Point Adjustable Sling

WEBSITE:

GunSlingsDirect.com

The Vero Tactical Two-Point Sling is designed to ensure nearly effortless transition between positions, just pull the loop and get into position. It allows users to easily transition from an inverted-high-chest-carry position to any shooting position by pulling out the tethered-loop-release buckle to release the tension on the sling and moving the firearm into position. The sling can be attached on either end to a 1-inch or larger sling swivel, or it can be wrapped around a standard collapsible AR-style stock.



MSRP: \$59.99

SPECIFICATIONS

- Available in black or black with an olive green padding cover
- Constructed of textile webbing



Galco

PRODUCT: RS9 Tapered Rifle Sling

WEBSITE: GalcoGunleather.com

The ambidextrous RS9 Sling fits 1-inch swivels. It is available in tan rough-out, cordovan top grain and black shrunken grain leather.



MSRP: \$45.95

SPECIFICATIONS

- Fits 1-inch swivels
- Ambidextrous



MSRP: \$59.95

SPECIFICATIONS

- Nylon web construction
- Fits AR15/M16 and M4 rifles

Galco

PRODUCT: Battl Sling

WEBSITE: GalcoGunleather.com

This three-point tactical sling features nylon web construction. It has a 2-inch-wide main strap that helps distribute weight and allows for comfortable all-day carry of even heavy shotguns. It includes a Fastex release buckle that allows for instant removal of the sling and shotgun.



Galco

PRODUCT: Safari Ching Sling

WEBSITE: GalcoGunleather.com

The Safari Ching Sling is extra-wide to spread your rifle's weight on your shoulder for comfort. It features a keyhole attachment system that makes fitting the sling to different shooters and rifles fast, secure and tool-free. The sling weighs 6.5 ounces.



MSRP: \$79.95

SPECIFICATIONS

- Fits rifles with two, 1-inch swivels
- Available in dark Havana brown and black leather

Condor Outdoor

PRODUCT: Cobra Single Point Bungee Sling

WEBSITE: CondorOutdoor.com

This single-point sling features a dual-bungee construction and an HK snap hook adapter covered with an elastic tube. The one-size sling has 1.25-inch webbing and Duraflex buckles. It's offered in olive drab, black and tan.



MSRP: \$41.95

SPECIFICATIONS

- Dual-bungee construction
- National Tactical Officers Association approved



MSRP: \$45.95

SPECIFICATIONS

- Fits 1-inch swivels
- Made from latigo dark Havana leather

C Havana

PRODUCT: Braided Cobra Rifle Sling

WEBSITE: GalcoGun-leather.com

This sling is constructed from nine rows of hand-braided latigo leather. It has hand-beveled edges and features the Galco logo at the top.

GUN WORLD

Find us on



Discover the world of firearms at your fingertips.

www.facebook.com/gunworldmagazine



MA DEUCE



ODE TO THE .50 BMG

STORY AND PHOTOS BY STAN SKINNER

Is the .50 BMG something special? **YOU BETCHA!**

I will pause a moment to note that the theme of this publication is “modern sporting rifles,” but be patient, I will get to that in due course.

AWESOME WEAPON OF WAR

The .50 BMG is the cartridge that swept Hitler's Luftwaffe from the air in World War II. Have you ever heard the expression, “I gave him the whole 9 yards!”? That ex-

pression sprang from an American fighter pilot who fired his aircraft's machine guns into an enemy aircraft until the entire 27-foot belt of ammunition that fed each of his six machine guns was expended. The cartridge that populated those belts was the .50 BMG.

The cartridge that Canadian Army Cpl. Rob Furlong used in his McMillan TAC-50 sniper rifle to kill an armed terrorist at more than a-mile-and-a-half was the .50 BMG.

During a nighttime battle during the Vietnam War, Marine Cpl. Charlie Camden fired his M2 Browning machine gun until the barrel glowed red in the night. His gunfire swept through the attacking NVA troops like a scythe mowing down ripe wheat. The cartridge he fired was the .50 BMG, and it saved his life and that of many other Marines that night.

Though he was a fearsome warrior that night, Camden

was my friend and a gentle giant of a man to his sons and daughters and their children. He lived a long and productive life until cancer took him last year. The .50 BMG saved many lives as yet unborn that terrible night in Vietnam.

Is the .50 BMG something special? **YOU BETCHA!**

Now, in the 21st century, that awesome weapon of war has become the most formidable sporting cartridge an American citizen can own without seeking license from



The ArmaLite AR-50 is 36 pounds of steel and aluminum with a muzzle brake that looks like it came off a tank cannon. This one is a seldom-seen left-hand model that the company made a few years ago.



The author's ArmaLite A-50L is a tack driver when shot from the bench. The riflescope is a Leupold VX-3 6.5-20x50mm LR on a 20MOA slanted Picatinny rail.

the federal government for what it terms “a destructive device.”

Away from the tragedy of war, a fortunate (and affluent) few have come into possession of a .50-caliber, M2 Browning machine gun, affectionately known as “Ma Deuce” by American soldiers who valued its presence for nine decades during American armed conflicts worldwide.

Legendary inventor John Browning designed the Ma Deuce at the behest of Gen. John Pershing and the U.S. Army, which wanted a more effective, longer-range anti-aircraft machine gun. The cartridge's full name is the .50 caliber Browning Machine Gun and, with the advent of NATO, it became the 12.7x99mm NATO. The cartridge is merely a scaled-up version of the Army's service cartridge, the .30-06, and it is one of the most-successful adaptations of all time. Browning's genius sealed the deal and the Ma Deuce was born.

Now civilian owners shoot it joyfully at such events as the Big Sandy Machine Gun Shoot near Wikieup, Ariz. During the night shoots at the

... THE M2 CHEWS UP .50 BMG AMMO AT A RATE OF UP TO 600 ROUNDS PER MINUTE. AT \$3.50–6 PER ROUND, YOU CAN DO THE MATH YOURSELF.



Dan Mattausch shoots the .50 BMG Barrett M82A1 from a bench in the desert near Tucson, Arizona. Behind him, the Barrett M95 and the author's ArmaLite AR-50L stand ready.

biannual event, the quarter-mile long firing light lights up with the simultaneous fire of literally hundreds of machine guns, not a few of which are the awesome Ma Deuce. Incidentally, the M2 chews up .50 BMG ammo at a rate of up to 600 rounds per minute. At \$3.50–6 per round, you

can do the math yourself.

During the night shoots, exploding targets downrange, the baleful glare of descending parachute flares and the near-deafening din resemble a Korean War night battlefield, except for the lack of incoming fire and Chinese bugles. It is an experience to be remem-

bered by anyone who has ever been there.

Is the .50 BMG something special? YOU BETCHA!

.50 BMG SPORTING RIFLES

Manufacturers such as Barrett, McMillan Firearms and ArmaLite now offer semiauto-

matic and bolt-action sporting rifles that adventuresome shooters use to compete in shooting matches at 1,000 and even 2,000 yards. I have tested a couple of Barretts and had the opportunity to fire McMillan's TAC-50, but these guns are for more well-heeled shooters than I.

However, I do have a scheme to get my mitts on a certain elderly TAC-50 that did its time in Afghanistan and has now passed into civilian hands.

In the meantime, I have acquired an ArmaLite AR-50, one of a few left-hand versions the Illinois company made a few years ago. This is a massive piece of ordnance, 36 pounds of steel and aluminum with a muzzle brake that looks like it came off a tank cannon.



Barrett's .50-caliber semiautomatic M-82A1 became the gold standard for military big-bore sniper rifles. The newer M107A1 has now been adopted by the U.S. Army.



A modified MG42 anti-aircraft tripod enables Tyler Hartung to shoot the AR-50L in a standing position.

Best of all, it is a tack driver. Without its carry handle it is an awkward bundle to carry, but from the bench or from my modified MG-42 tripod, it's pretty bueno.

At the shooting range (those few shooting ranges where the range rules permit shooting the .50 BMG), my

ArmaLite draws shooters like flies to honey. Spectators gather 'round to absorb the spectacle of the .50's roar and the dust cloud kicked up by its muzzle blast.

However, if I ask an onlooker whether he'd like to touch off one or two, eyes widen and, more often than

not, with a shake of the head and a step back, the invitation is nervously declined. You'd think I'd offered them a ride on a mechanical bull.

Conventional wisdom has it that you'd better wear ear plugs AND ear muffs when the big 50 speaks. The blast deflected by the muzzle brake, it is said, is enough to make a strong man cry.

A SURPRISING SECRET

There is a secret that only a select few are privy to. OK, here it is — are you ready for this?

The .50 BMG is a pussycat. That big muzzle brake I mentioned earlier and the 36-pound weight of my ArmaLite reduces recoil to nothing more than a gentle tap, little more than a well-fitted 20 gauge or

maybe a .308. The same holds true for the Barretts, although I would rate the recoil a tad stouter, even on the semiautomatic M82A1. Ditto for the McMillan TAC-50, which I have personally shot off-hand. I do say that hefting a .50-caliber rifle into a suitable standing position is something that I can manage for only a few seconds.

I have also watched a comely young blonde (who had never before fired any gun) assume a supported prone position behind a TAC-50 and launch round after round down range. When she arose she had a smile on her face and said, "Wow, awesome."

By the way, I stood only 3 feet away shooting pictures, directly in her muzzle blast, and I enjoyed the breeze.

MAJESTIC POWER

If you've ever watched a World War II P-51 Mustang fighter plane begin its takeoff roll and felt the thunder of its Rolls Royce V12 Merlin engine vibrate through every inch of your body, you might have an inkling of what it's like to experience the thrill of touching off a Ma Deuce or one of the modern sporting rifles such as my ArmaLite AR-50.

Is the .50 BMG something special? YOU BETCHA! **MSR**

THE AUTHOR: Stan Skinner is the editor-in-chief of *Modern Sporting Rifles*.



The Barrett M95 is a bolt-action bullpup design for the .50 BMG. Like the Barrett M82A1, it accepts five- or 10-shot magazines.



FIELD TESTED

MSR

TAX DOLLARS AT WORK

↓ CONQUER THE DARKNESS WITH NIGHT VISION
STORY AND PHOTOS BY TERRILL HOFFMAN



The M845 is just one of several options being offered by Tactical Night Vision Co. The trick is to do your homework and to find a device that fits your needs. It only took a night or two before I felt like the alpha predator in the darkness and beavers shook at the sound of my name.

Sit in on the activities of any hunting camp and you will discover that more time is actually spent in conversation than in the field.

If nothing else, hunting season is a sociable time of the year, and this is one area where I can claim to be an expert. I may not be the most skilled hunter in the woods, but I can run my mouth with the best of them. Countless hours have been spent recounting old adventures, singing the praises of a trusted rifle or just generally chatting about the latest and greatest outdoor gear.

For more than 20 years, my hunting partners and I have gathered in search of whitetail deer and friendship. During this time, one thing has become apparent to all of us, it's not your grandfather's woods anymore.

ENTER MSR'S

More and more hunters are replacing their traditional rifles with the AR family of modern sporting rifles. While this trend has taken place over several years, there has been a comical aspect of this transformation that has been generally ig-

nored. Only in a deer camp can everyone complain about the taxes inflicted upon us by the government and then turn around and be thankful for the millions and millions of dollars spent by the U.S. military. We have to chuckle when we realize that it has always been our tax dollar, and the lure of military contracts, that has created the advancements in sporting

firearms and outdoor equipment. If you doubt this concept, just look at the MSR — laser rangefinders, suppressed rifles and the recent surge in the use of night vision devices while hunting. Sooner or later, equipment that was once considered tactical will be modified for sporting purposes.

Even my small group of nimrods has embraced most mod-

ern advancements in hunting gear, but it has only been recently that we became interested in night vision and being able to see after dark. No, we would never consider the use of night vision for deer hunting because it is highly illegal and we consider it unethical, but our curiosity has been sparked by the introduction of coyote and hog hunting in our state.



Again at 100 yards and under a clear sky and starlight, the Gen 3 scope had better definition to the full-size torso target. You can also notice more detail around the tractor tire on the left side of the image.

■ ■ ... IT HAS ALWAYS BEEN OUR TAX DOLLAR, AND THE LURE OF MILITARY CONTRACTS, THAT HAS CREATED THE ADVANCEMENTS IN SPORTING FIREARMS AND OUTDOOR EQUIPMENT. ■ ■



CLOCKWISE: The image of the car is brighter at 50 yards using the Gen 3 but the difference between the two units is less noticeable. Using either unit I was surprised to see that you could actually tell if anyone was in the car. • The M845 night vision scope adjusts like any other type of scope. The half-MOA clicks were precise and the scopes held their point of impact rather well, even after several nights of switching back and forth between the units. • You'll notice the small hole in the lens cover. This will prevent too much light from entering the system while you sight the rifle in during daylight. The cost of a decent night vision device is enough justification to keep both front and rear covers in place.

Feral hogs and coyotes are considered pests in North Carolina and are just now reaching the populations where they are becoming a real problem. In fact, our wildlife department has gone against all traditional beliefs and has allowed night hunting. Because both species are detrimental to our deer herd, my fellow hunters and I have declared war and decided to use any means possible for their eradication. We only had

one problem; no one in my hunting group had a clue about the use of night vision.

However, because I have had the opportunity to use it a couple of times while hunting in Texas, I decided it was time for me to do a little onsite investigation. After all, I could not only get a chance to play with a few new toys, I could even bluff my way into convincing my fellow hunters that I knew what I was talking about.

TNVC

Past experience has taught me that the best way to learn is to find an expert and glean as much information as they are willing to share. In the case of night vision, Tactical Night Vision Co. (TNVC) is filled with experts, and they are a friendly and helpful crowd. I was able to spend time talking with both Charles Lasky and Kyle Harth of TNVC, and I hope they both know how grateful I am for the

time they spent giving me a night vision crash course. Only my third grade teacher, Mrs. Hamrick, had been more patient.

During our conversations, I'm sure I was able to display my total lack of knowledge on the subject. I'm also sure that I'm not the only hunter out there looking for answers, and with this in mind I'll recap some of the information freely given by TNVC.



It may not seem like such a major detail before you buy a night vision scope, but afterward you'll appreciate the fact that the M845 uses standard AA batteries. I only changed the batteries once in two weeks, but then I noticed the lens cover was still on the scope.

HOW THEY WORK

As we have seen in various movies and television shows, night vision devices come in monocular, binoculars, goggles and riflescopes. Each has its own purpose and advantages. To complicate matters even more, there are five different generations of night vision and several different models of each type and generation.

If you were wondering where to begin in your efforts to understand night vision, the logical place would be to learn the principle that makes them work. While we are seeing the introduction of thermal units on the market that show the heat signature of an object, units commonly referred to as "night vision" operate off of the principle of light amplification. The existing (or ambient) light is gathered in the objective lens of the device and is funneled through the image intensifier tube. This tube takes the light energy (or photons) and converts it to electrical energy known as electrons. These electrons are then multiplied by a factor of thousands and are then converted back to photons before they strike a screen coated with phosphorus. It is the phosphorus that gives the final image the greenish appearance we have seen in the movies. Because we end up with more photons than we started with, we are basically increasing the effect of the ambient light.

M845 MK.4 SPECS

DIMENSIONS

9 (L) x 3.5 (W) x 4 (H) inches

WEIGHT 34 ounces

FINISH Matte black, corrosion resistant

POWER Two standard AA batteries

BATTERY LIFE About 40 hours at room temperature

WARRANTY One year

RECOIL RATING Up to and including 7.62 x 51

GENERATION Gen 2 or Gen 3

RESOLUTION Gen 2 - 45 Lp/Mrad (Typ)/Gen 3 -64 Lp/Mrad (Typ)

MAGNIFICATION 2.8x

LENS SYSTEM 75mm

f1.5FOV: 10 degrees

OBJECTIVE Adjustable focus

EYE RELIEF 50mm

RETICLE 2MOA red dot

DIOPTER +2 to -2

ENVIRONMENT Water resistant 1m for 30 minutes

INCLUDED Field bag, shuttered-eye guard, daylight lens filter, batteries, Stanag #310 Mount Kit

MSRP \$1,899 for Gen 2, **\$2,495** for Gen 3



This explanation is about as simple as they come and works for me. I have no desire to get a degree in light management, but I do want to see in the dark. Rest assured that when I explain the process to my hunting partners, I'll find a few big words to throw into the lecture.

GENERATIONS

Night vision devices are older than most of us would believe and they are classified with the term "generations" as they advance in technology.

The first units were used during the late part of WWII. Deemed "Generation 0," these units required an active infrared projection unit and are now considered obsolete. The only ones you may come across will be in a historical display.

Generation 1 units are the first that do not require an active projection of infrared light and work with the ambient light of the moon and stars. Over the years there have been major advances in the technology to where we have Gen 2 and Gen 3 classifications that mark major performance levels.

There is somewhat of a debate as to whether Gen 4 exists; the best way to phrase it is "maybe." Improvements to performance have been reached but only at the cost of shortening the lifespan of the intensifier tube. Let's just say Gen 4 is still on the drawing board. However, some of the developments discovered while work-



Now that I am an expert, I can tell you how to operate the M845. Turn the switch to the on position, aim and fire. If you stay for the whole lecture, you'll learn that you can also adjust the brightness of the red dot.

ing on this new generation have been used to improve the third generation units.

SCHOOL IS OUT

The above information is about as brief as I could make it because most of us really don't care how it works; we just like that it does work. You could tell me it's magic and I would be perfectly content with that explanation. What most of us want to know is what we need to buy to get the results we are looking for.

The only options available on the market are either Gen 1, 2 or 3, and each upgrade in generation represents an up-

grade in cost. As you would expect, Gen 1 is the least expensive but it is also the generation with the poorest performance. After trying a couple of these devices, I can honestly say they have two good uses. The first is watching wildlife in your backyard as long as you have a full moon and a small yard. The second use is to teach you the lesson that you get what you pay for. If you don't mind paying \$300–500 just to realize that you should have saved up a little longer and bought a better unit, you will be content. Some of these units do have an infrared illuminator that

may help with performance but Gen 1 devices are still highly limited.

I have had a limited opportunity to use Gen 3 units and will say that I was highly impressed. However, one or two evenings over the past two years really didn't give me the exposure I wanted and it left me with a curiosity about how a Gen 2 unit would perform.

Gen 2 prices normally start in the \$1,500 range, which is about \$1,000 below the starting point for Gen 3 units. Either way that is too costly to just throw money at the problem and hope it works out. My



The surge in the population of feral hogs can take a lot of credit for the surge in interest in night vision. Hogs are actually smarter than dogs and they know there is safety in the darkness.

solution was to go back to the boys at TNVC and ask if they could solve my dilemma.

I explained that what I wanted was a night vision scope with the purpose of hunting hogs and coyotes. Because I didn't foresee the need to sneak up on an enemy encampment, a dedicated rifle-scope would be the best solution. TNVC had two M845 Mk4 scopes I could borrow for a two-week period; one came equipped with a Gen 2 intensifier tube and the other a Gen 3 tube. I really couldn't ask for more because this way I could do a direct comparison of the two generations without worry-

ing about other factors coming into play.

M845

These scopes are fixed-powered units with a 2.8x magnification level and a simple 2 MOA red-dot aiming point. They have a +2 to -2 diopter, and the objective lens can be focused for whatever distance needed. Both scopes came set up with quick-release mounts designed for a Picatinny rail system.

The controls are about as simple as it gets. A side-mounted switch is turned to the "on" position and you are

set to go. This switch does have three more positions but they only dim the brightness of the red dot.

When shopping for night vision, don't forget to consider the type of battery required. The MK 845 requires nothing more than two AA batteries and they are rated for a run time of 40 hours at room temperature.

Another aspect to consider when buying a scope is the level of recoil to which they will be subjected. The MK 845 is rated for up to .308 Win. Because I was going after varmint-sized animals, I chose to mount them on an AR-15 chambered in 7.62x40WT. To protect the

tube and the lens, the scopes have both front and rear lens covers. Sight-in was clear-cut; the front lens cover has a small hole to limit the amount of light that can reach the tube during daylight use.

The red dots were aligned for a dead-on impact at 100 yards and the half-MOA adjustments were precise. Not wanting to have different rifles impact my testing, I sighted both scopes for the same rifle. Any change of impact noticed while switching back and forth between the scopes was minimal. Even with a 2.8x scope and a 2-MOA dot, I was able to fire groups of 1.5–1.63 inches at 100 yards. It may seem odd, but this is a time in which I think I could have shot better at night without the lens cover than I did during the day.

THE TRUE TEST

The entire experiment was to evaluate the performance level between the Gen 2 and Gen 3 tubes every night for two weeks, and that is exactly what I did. This is the time in which I am supposed to insert a photograph of myself kneeling beside a 300-pound boar, but that part of my plan just didn't work out. Mother Nature had her own plan and decided to drop every acorn the trees had during this period.

The two nights I tried to go after hogs were the two nights they were too busy chasing



A three-shot group of 1.63 inches may not be my best performance, but since it was shot at 10 p.m. on a moonless night with a 2.8x scope I have to admit I'm rather proud of it.

acorns to bother with my meager offering of corn. The other nights found me perched on the dam at the end of the pond waiting for beavers to come out. If you don't consider a beaver a worthy target, just wait to see how much damage they can do. At first my wife and I thought the colony of beavers were entertaining, but after losing a dozen trees from around our shoreline, she quickly took out a contract on them. After my "testing," I can say that we have a much smaller colony.

Although my hunting improved once I went after the beavers, Mother Nature still had her way with the process. Every night was either moon-

less or overcast. I not only tested the two scopes, but I tested them under the worst conditions possible. Each day I would switch the scopes and one would act as a handheld spotting scope while the other would be mounted to the rifle. Both scopes had the opportunity to be used under starlight and under heavy cloud cover, but neither were used under what I would consider moonlight.

2 VS. 3

This is the point where I should just come out and say that the Gen 3 scope outperformed the Gen 2 model. It did and there was no doubt about

it, but that was the result I expected. The image was brighter under all conditions. However, the Gen 2 model performed well at the same time. The image was darker and on the overcast nights it was limited to a usable distance of about 75 yards. I could see a little further with it, but I would not consider it clear enough to take a shot at a 40-pound animal. Even the worst pest deserves an accurate killing shot. Under these same conditions, "usable" distance for the Gen 3 was extended substantially.

The bottom line is if you are willing to consider your weather conditions before heading out to hunt, the Gen 2 unit may be all you need. The performance gap between the Gen 2 and Gen 3 was noticeable but it was not as great as the gap between the Gen 1 and Gen 2.

The last part of my testing consisted of taking photographs through both scopes. Please take into account that trying to focus a camera while looking through a scope can be a little tricky, but these photographs should help you judge for yourself. One thing that cannot be questioned was the quality of both scopes. They were stout, easy to use and very clear.

THE PURCHASE IS IMMINENT

Because the two scopes are on their way back to TNVC, I

HOW TO REACH THEM

Tactical Night Vision Co. (TNVC)
25612 Barton Road, No. 328
Loma Linda, CA 92354-3110
(909) 796-7000
TNVC.com

will be scanning the company's website over and over while I save up the funds to make a purchase. My little AR looks bare without a M845 Mk.4 mounted and night hunting was too entertaining not to continue the process.

At the same time I'll be practicing the lecture I have planned for the next time the group gathers for a hunt. They will end up buying their own units if for no other reason than to shut me up. **MSR**

THE AUTHOR: Terrill Hoffman, U.S. Navy veteran, writes regularly for Engaged Media.

ADVERTISER	PAGE
5.11 Tactical Series	25
American Tactical Imports	85
Blade-Tech Industries	132
CampCo	131
Colt's Manufacturing Company	2
IWI US	35
Major Surplus & Survival	3
Original Swat	7
Secure Medical	95
Silencerco	31

Now at your fingertips...



World of Firepower

World of Firepower is now available on Apple Newsstand, Google Play and Kindle.

World of Firepower provides the gun enthusiast with everything about the gun lifestyle, including the latest gear, home defense, trends, training and the hottest new guns on the market.

Download the **FREE APP** and get a 1-year subscription (6 issues) for only **\$15.99** and save **70% off** newsstands!
You can also purchase single issues for only **\$3.99**.



For questions on downloading this app contact 800-764-6278

UNTIL NEXT TIME ...

MSR



There are many joys in life, but do any match the joy of shooting?

It entails the intensity of competition, the opportunity for growth, time with friends, and the need to be on top of your game both mentally and physically.

So, what is it that sets our sport apart? All of the above.

UZI TACTICAL PENS

ES"D



LEGENDARY & DEPENDABLE

MANY FEATURES TO CHOOSE FROM

GLASSBREAKER TIP

LED FLASHLIGHT

HANDCUFF KEY

DNA CATCHER

STRIKING TIP

THE LAST **PEN** YOU'LL EVER **NEED**

10% OFF WITH CODE **BECKM14**

OWN AN UZI
FOR UNDER **\$20**

WWW.UZI.COM
888-9CAMP14 - 323-766-2555



UZI is a registered trademark of IWI.
All rights reserved.



Universal **L**ocking **U**tility

www.blade-tech.com
877-331-5793
5530 184th St E, Puyallup Washington

